

ORAL ARGUMENT NOT YET SCHEDULED

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

No. 12-1100, and consolidated cases

WHITE STALLION ENERGY CENTER, LLC, et al.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Respondent.

**ON PETITIONS FOR REVIEW OF FINAL RULE OF THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

BRIEF FOR RESPONDENT

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DATED: January 22, 2013 (Initial Brief)

RESPONDENTS' CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit R. 28(a)(1), Respondent United States

Environmental Protection Agency ("EPA") submits this certificate as to parties, rulings and related cases.

(A) Parties and amici: With one exception, the parties and amici to this action are those set forth in the certificate filed with the Joint Opening Brief of State, Industry and Labor Petitioners. The exception is that on December 6, 2012, the Court granted the motion of Petitioner EcoPower Solutions (USA) Corporation to dismiss its petition for review (Case No. 12-1170).

(B) Ruling under review: This case is a set of consolidated petitions for review of EPA's Final Rule entitled "National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units," 77 Fed. Reg. 9304 (Feb. 16, 2012).

(C) Related cases: Each of the petitions for review consolidated under No. 12-1100 is related. This case is related to Case No. 12-1272, which addresses two severed issues related to emission standards for new coal and oil-fired units. *See* June 28, 2012 Order (Doc. No. 1381112). Briefing in that case is currently being held in abeyance pending administrative reconsideration proceedings. *See* Order dated September 12, 2012 (Doc. No. 1394140). In addition, Case No. 12-1166 challenges new source performance standards ("NSPS") which were promulgated

in the same Federal Register notice as the rule under review in this case. The NSPS issues were deconsolidated from these cases by order dated August 24, 2012 (Doc. No. 1391295).

DATED: January 22, 2013

/s/ Eric G. Hostetler
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TABLE OF CONTENTS

JURISDICTIONAL STATEMENT	1
STATEMENT OF ISSUES	1
STATUTES AND REGULATIONS	3
STATEMENT OF THE CASE.....	3
I. INTRODUCTION	3
II. STATUTORY AND REGULATORY BACKGROUND.....	4
A. Hazardous Pollutant Regulation Under the CAA	4
1. Listing of Source Categories	6
2. Section 7412(d) Emission Standards	8
B. Hazardous Pollutants Emitted by EGUs	9
C. Regulatory Background.....	11
D. The Final Rule.....	13
1. Reaffirmation of the Section 7412(n)(1)(A) Determination	13
2. The Final Emission Standards	15
3. The Regulatory Impact Analysis	16
STANDARD OF REVIEW	16
SUMMARY OF ARGUMENT	18
ARGUMENT	21

I.	EPA REASONABLY DETERMINED THAT IT IS “APPROPRIATE AND NECESSARY” TO REGULATE EGU HAZARDOUS POLLUTANT EMISSIONS.....	21
A.	EPA’s 2000 Determination.....	21
B.	EPA’s 2012 Determination	24
1.	The Mercury Risk Assessment.....	25
2.	The Inhalation Risk Assessment for Hazardous Pollutants Other Than Mercury	28
3.	Environmental Hazards	29
C.	Petitioners’ Challenges to EPA’s “Appropriate and Necessary” Determinations Lack Merit	30
1.	The 2000 “Appropriate and Necessary” Determination is Valid.....	31
a.	EPA Adequately Characterized Mercury Health Risks in 2000	31
b.	EPA Complied With Applicable Procedural Requirements	33
2.	The 2012 Determination and EPA’s Associated Statutory Interpretations Are Valid	36
a.	EPA Has Authority to Reaffirm Its Listing of EGUs Based on Consideration of New Evidence	36
b.	EPA Properly Considered the Mercury TSD	38

c.	The Inhalation Risk Assessment Provided a Credible Analysis of Hazards Associated With Other Pollutants	41
i.	The Cancer Risk Benchmark Level	41
ii.	Use of Certified Data.....	43
d.	EPA Properly Considered Environmental Hazards	45
e.	EPA’s Findings Concerning Acid Gas Hazards Are Amply Supported.....	48
f.	EPA Properly Considered Cumulative Impacts	49
g.	EPA Reasonably Exercised Discretion to Decline to Consider Costs Associated With Regulation	50
II.	AFTER LISTING EGUs, EPA PROPERLY PROMULGATED SECTION 7412(d) EMISSION STANDARDS FOR ALL HAZARDOUS POLLUTANTS EMITTED BY EGUs	56
A.	EPA Appropriately Promulgated Section 7412(d) Emission Standards After Listing EGUs	56
B.	EPA Properly Regulated All Hazardous Pollutants Emitted by EGUs Following Its “Appropriate and Necessary” Determination	59
III.	EPA PROPERLY DENIED UARG’S DELISTING PETITION	62
IV.	EPA WAS NOT REQUIRED TO MAKE AN ADDITIONAL FINDING PRIOR TO REGULATING EGUs THAT ARE AREA SOURCES	63

V.	EPA’s “APPROPRIATE AND NECESSARY” DETERMINATION APPLIES TO PETROLEUM-COKE UNITS	67
VI.	THE EXISTING SOURCE MERCURY EMISSION STANDARD FOR COAL-FIRED UNITS IS CONSISTENT WITH THE CAA	69
A.	EPA Collected a Substantial Amount of Mercury Data	71
B.	EPA Properly Set the Existing Source Mercury Standard Based On the Top 12 Percent of Available Data.....	74
C.	The Best-Performing Sources for Non-Mercury Metals Were Not The Best-Performing Sources for Mercury Control	75
D.	The Mercury Standard Is Not Overly Stringent	78
VII.	EPA PROMULGATED APPROPRIATE EMISSIONS STANDARDS FOR EACH SUBCATEGORY	79
A.	The Emission Standards for EGU’s Designed to Burn Low Rank Coal Are Achievable and Properly Calculated	79
1.	The Mercury MACT Floor for this Subcategory Was Properly Calculated.....	79
2.	EPA’s Beyond-the-Floor Standard for this Subcategory is Achievable.....	81
B.	EPA’s Particulate Matter Standards for Petroleum-Coke Units Incorporated All Relevant Data and Are a Logical Outgrowth of the Proposed Rule	83
C.	EPA’s Non-Continental Unit Standards Are Reasonable	86
VIII.	EPA REASONABLY DECLINED TO SET ALTERNATIVE HEALTH-BASED LIMITS FOR ACID GAS EMISSIONS	88
IX.	EPA REASONABLY DECLINED TO CREATE SUBCATEGORIES FOR CFB UNITS	90

A.	EPA Has Significant Discretion in Determining Whether Subcategories Are Appropriate	91
B.	The Record Supports EPA’s Decision Not to Create CFB Subcategories	92
X.	EPA WAS NOT REQUIRED TO MANDATE FUEL SWITCHING TO NATURAL GAS.....	96
A.	Julander Lacks Prudential Standing.....	96
B.	EPA Properly Declined to Require Fuel Switching as a Beyond-the-Floor Standard.....	97
XI.	EPA REASONABLY REJECTED PUBLIC POWER’S DEMAND FOR A BLANKET COMPLIANCE EXTENSION.....	99
A.	EPA Addressed Public Power’s Compliance Concerns	100
B.	EPA Reasonably Rejected the Demand for a Blanket Extension.....	101
XII.	THE “AVERAGING ALTERNATIVE” IS LAWFUL.....	103
XIII.	EPA’S MONITORING OPTIONS FOR NON-MERCURY METALS PROVIDE SUFFICIENTLY RELIABLE AND TIMELY INFORMATION FOR DETERMINING COMPLIANCE.....	111
A.	Compliance Alternatives for Non-Mercury Metals	111
B.	CPMS Provide Sufficient and Timely Compliance Information	113
C.	The Quarterly Stack Testing and Low Emitting Options Provide Sufficient and Timely Compliance Information	118
	CONCLUSION	120

TABLE OF AUTHORITIES

CASES

<i>Am. Iron & Steel Inst. v. EPA</i> , 115 F.3d 979 (D.C. Cir. 1997)	77
<i>Am. Textile Mfrs. Inst. v. Donovan</i> , 452 U.S. 490 (1981)	52
<i>Am. Water Works Ass'n v. EPA</i> , 40 F.3d 1266 (D.C. Cir. 1994)	85
<i>Am. Wildlands v. Kempthorne</i> , 530 F.3d 991 (D.C. Cir. 2008)	79
<i>Appalachian Power Co. v. EPA</i> , 249 F.3d 1032 (D.C. Cir. 2001)	35
<i>Ass'n of Am. Railroads v. Dep't of Transp.</i> , 38 F.3d 582 (D.C. Cir. 1994)	86
<i>Ass'n of Data Processing v. Camp</i> , 397 U.S. 150 (1970)	96
<i>Baltimore Gas & Elec. Co. v. NRDC</i> , 462 U.S. 87 (1983)	17
<i>Castaneda-Gonzalez v. Immigration & Naturalization Serv.</i> , 564 F.2d 417 (D.C. Cir. 1977)	50
<i>Cement Kiln Recycling Coal. v. EPA</i> , 255 F.3d 855 (D.C. Cir. 2001)	96
* <i>Chevron, U.S.A., Inc. v. NRDC</i> , 467 U.S. 837, 842-45 (1984)	17, 45, 49, 59, 65

* Authorities upon which we chiefly rely are marked with asterisks.

<i>City of Portland v. EPA</i> , 507 F.3d 706 (D.C. Cir. 2007)	85
<i>Clean Air Implementation Project v. EPA</i> , 150 F.3d 1200 (D.C. Cir. 1998)	116, 117
<i>Coal. for Responsible Regulation v. EPA</i> , 684 F.3d 102 (D.C. Cir. 2012), <i>rehearing en banc denied</i> , 2012 WL 6621785 (D.C. Cir. Dec. 12, 2000)	32
<i>Dep't of Transp. v. Public Citizen</i> , 541 U.S. 752 (2004)	83, 84
<i>Desert Citizens Against Pollution v. EPA</i> , 699 F.3d 524 (D.C. Cir. 2012)	57
<i>Ethyl Corp. v. EPA</i> , 541 F.2d 1 (D.C. Cir. 1976) (en banc)	16, 32
<i>Ethyl Corp. v. EPA</i> , 51 F.3d 1053 (D.C. Cir. 1995)	46
<i>Fertilizer Inst. v. EPA</i> , 935 F.2d 1303 (D.C. Cir. 1991)	84
<i>Grocery Mfrs. Ass'n v. EPA</i> , 693 F.3d 169 (D.C. Cir. 2012)	97
<i>Hazardous Waste Treatment Council v. EPA</i> , 861 F.2d 277 (D.C. Cir. 1988)	97
<i>MetroPCS California, LLC v. FCC</i> , 644 F.3d 410 (D.C. Cir. 2011)	45
<i>Michigan v. EPA</i> , 213 F.3d 663 (D.C. Cir. 2000)	51
<i>Mossville Env'tl. Action Now v. EPA</i> , 370 F.3d 1232 (D.C. Cir. 2004)	9

* <i>Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.</i> , 463 U.S. 29 (1983)	17
<i>Nat'l Elec. Mfrs. Ass'n v. EPA</i> , 99 F.3d 1170 (D.C. Cir. 1996)	68
* <i>Nat'l Lime Ass'n v. EPA</i> , 233 F.3d 625 (D.C. Cir. 2000)	60, 65
* <i>New Jersey v. EPA</i> , 517 F.3d 574 (D.C. Cir. 2008)	5, 12, 33, 58, 60, 61, 65
<i>New York v. Reilly</i> , 969 F.2d 1147 (D.C. Cir. 1992)	81
<i>NRDC v. EPA</i> , 824 F.2d 1146 (D.C. Cir. 1987)	17, 24
* <i>NRDC v. EPA</i> , 489 F.3d 1364 (D.C. Cir. 2007)	63, 91, 101
<i>Portland Cement Ass'n v. Ruckelshaus</i> , 486 F.2d 375 (D.C. Cir. 1973)	116, 117
<i>Pub. Citizen, Inc. v. Fed. Aviation Admin.</i> , 988 F.2d 186 (D.C. Cir. 1993)	98
<i>Ry. Labor Executives' Ass'n v. U.S. R.R. Ret. Bd.</i> , 749 F.2d 856 (D.C. Cir. 1984)	80
<i>Sierra Club v. EPA</i> , 167 F.3d 658 (D.C. Cir. 1999)	77
<i>Sierra Club v. EPA</i> , 325 F.3d 374 (D.C. Cir. 2003)	46
* <i>Sierra Club v. EPA</i> , 353 F.3d 976 (D.C. Cir. 2004)	111, 113, 116, 117, 119, 120

<i>Sierra Club v. EPA</i> , 479 F.3d 875 (D.C. Cir. 2007)	60
<i>Small Refiner Lead Phase-Down Task Force v. EPA</i> , 705 F.2d 506 (D.C. Cir. 1983)	16
<i>Thomas v. New York</i> , 802 F.2d 1443 (D.C. Cir. 1986)	35, 36
<i>UARG v. EPA</i> , No. 01-1074, 2001 WL 935363 (D.C. Cir. July 26, 2001)	33, 34
<i>United States v. Hines</i> , 694 F.3d 112 (D.C. Cir. 2012)	57
<i>Whitman v. Am. Trucking Associations</i> , 531 U.S. 457 (2001)	51, 52

STATUTES

42 U.S.C. §§ 7401-7671q	4
42 U.S.C. § 7412	1
Pub. L. No. 90-604, 84 Stat. 1676, 42 U.S.C. § 7412(a)(1) (1970)	5
42 U.S.C. § 7412(a)(1)	6, 7
42 U.S.C. § 7412(a)(2)	6
42 U.S.C. § 7412(a)(8)	6, 19, 65
42 U.S.C. § 7412(b)(2)	47
42 U.S.C. § 7412(c)	6, 64, 65
42 U.S.C. § 7412(c)(1)	6
42 U.S.C. § 7412(c)(2)	8

42 U.S.C. § 7412(c)(1)-(3).....	64
42 U.S.C. § 7412(c)(3).....	7, 19, 64
42 U.S.C. § 7412(c)(5).....	8, 12
42 U.S.C. § 7412(c)(9).....	53
42 U.S.C. § 7412(c)(9)(B)(i).....	42
42 U.S.C. § 7412(c)(9)(B)(ii)	47
42 U.S.C. § 7412(d)	6, 56, 60, 65
42 U.S.C. § 7412(d)(2).....	2, 9, 19, 20, 97, 98
42 U.S.C. § 7412(d)(3)(A)	9, 70, 80
42 U.S.C. § 7412(d)(3)(B)	9, 87
42 U.S.C. § 7412(d)(4).....	20, 88, 89
42 U.S.C. § 7412(d)(5).....	9, 66
42 U.S.C. § 7412(e)(4).....	8, 33
42 U.S.C. § 7412(n)(1)(A)	7, 11, 14, 18, 19, 21, 34, 45, 51, 55, 64, 65
42 U.S.C. § 7412(n)(1)(B)	8, 21, 22, 47, 50
42 U.S.C. § 7412(n)(1)(C)	8, 22
42 U.S.C. § 7412(n)(3).....	58
42 U.S.C. § 7604(a)(2).....	13
42 U.S.C. § 7607(b)(1).....	1
42 U.S.C. § 7607(d)(6)(C)	87

42 U.S.C. § 7607(d)(7).....	87
42 U.S.C. § 7607(d)(7)(A)	44
42 U.S.C § 7607(d)(7)(B)	68, 113
42 U.S.C. § 7607(d)(9).....	16
Pub. L. No. 101-549, Title V, § 501, 104 Stat. 2642 (Nov. 15, 1990)	117
42 U.S.C. § 7661c(b)	20, 111, 116, 117, 120

FEDERAL RULES OF APPELLATE PROCEDURE

Fed. R. App. P. 28(a)(9).....	79
-------------------------------	----

CODE OF FEDERAL REGULATIONS

40 C.F.R. part 64	115
-------------------------	-----

FEDERAL REGISTER

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60 Fed. Reg. 35,393 (July 7, 1995).....	35
61 Fed. Reg. 28,197 (June 4, 1996)	34
62 Fed. Reg. 8314 (Feb. 24, 1997)	114
62 Fed. Reg. 52,384 (Oct. 7, 1997).....	104
65 Fed. Reg. 10,783 (Feb. 29, 2000)	35
65 Fed. Reg. 18,992 (Apr. 10, 2000)	35

65 Fed. Reg. 79,825 (Dec. 20, 2000)	3, 11, 12, 22, 23, 69
67 Fed. Reg. 6521 (Feb. 12, 2002)	64
69 Fed. Reg. 4654 (Jan. 30, 2004)	69
70 Fed. Reg. 15,994 (Mar. 29, 2005)	12
70 Fed. Reg. 28,606 (May 18, 2005)	12, 93
74 Fed. Reg. 58,012 (Nov. 10, 2009)	13
75 Fed. Reg. 54,970 (Sept. 9, 2010)	66
76 Fed. Reg. 15,608 (Mar. 21, 2011)	93
76 Fed. Reg. 24,976 (May 3, 2011)	9, 10, 11, 13, 14, 15, 22, 24, 25, 28, 30, 35, 40, 41, 42, 44, 48, 49, 57, 61, 66, 68, 69, 73, 76, 77, 81, 84, 85, 86, 92, 97, 98
76 Fed. Reg. 29,032 (May 10, 2011)	102
77 Fed. Reg. 9304 (Feb. 12, 2012)	13, 15, 16, 23, 24, 25, 27, 29, 30, 37, 39, 41, 42, 43, 50, 55, 57, 58, 59, 61, 62, 63, 65, 66, 67, 68, 78, 79, 83, 84, 85, 86, 88, 89, 90, 92, 93, 94, 95, 96, 99, 100, 101, 102, 103, 104, 106, 107, 109, 112, 114, 115, 119
77 Fed. Reg. 22,392 (Apr. 13, 2012)	99
77 Fed. Reg. 71,323 (Nov. 30, 2012)	97

LEGISLATIVE HISTORY

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GLOSSARY

CAA	Clean Air Act
CAMR	Clean Air Mercury Rule
CEMS	Continuous Emissions Monitoring Systems
CFB	Circulating Fluidized Bed
CPMS	Continuous Parameter Monitoring System
CRR	Coalition for Responsible Regulation
EPA	Environmental Protection Agency
EGU	Electric Utility Steam Generating Units
FCC	Federal Communications Commission
GACT	Generally Available Control Technology
HON	Hazardous Organic NESHAP
ICR	Information Collection Request
MACT	Maximum Achievable Control Technology
MATS	Mercury and Air Toxics Standards
NAS	National Academy of Sciences
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NAAQS	National Ambient Air Quality Standards
NRDC	Natural Resources Defense Council
NSPS	New Source Performance Standard

PM	Particulate Matter
RIA	Regulatory Impact Analysis
RTC	Response to Comments
SAB	Science Advisory Board
SO ₂	Sulfur Dioxide
TSD	Technical Support Document
UARG	Utility Air Regulatory Group
UPL	Upper Prediction Limit

JURISDICTIONAL STATEMENT

Jurisdiction exists under 42 U.S.C. § 7607(b)(1).

STATEMENT OF ISSUES

1. Did EPA reasonably conclude that hazardous air pollutant (“hazardous pollutant”) emissions from coal- and oil-fired electric utility steam generating units (“EGUs”) pose hazards to public health and the environment?
2. Did EPA reasonably determine that it is appropriate and necessary to regulate, under section 112 of the Clean Air Act (“CAA” or “the Act”), 42 U.S.C. § 7412 (“section 7412”), hazardous pollutant emissions from EGUs where, after imposition of other Act requirements, these emissions pose hazards to public health and the environment?
3. Did EPA properly promulgate standards for all hazardous pollutants emitted by EGUs?
4. Did EPA properly deny a petition to remove EGUs from the list of source categories to be regulated under section 7412?
5. Was EPA required to make a separate finding under a different statutory provision prior to regulating EGUs that are “area sources”?
6. Did EPA’s listing of coal- and oil-fired EGUs include the listing of petroleum-coke fired EGUs?

7. Did EPA properly calculate section 7412(d) standards for particular subcategories, including coal-fired units, low rank virgin coal-fired units, liquid oil-fired units, and solid oil-derived fuel-fired units?
8. Did EPA reasonably exercise discretion to decline to set alternative, health threshold-based standards for acid gas emissions under section 7412(d)(4)?
9. Did EPA reasonably exercise discretion to decline to subcategorize circulating fluidized bed (“CFB”) units?
10. Was EPA compelled to require coal-fired EGUs to switch to natural gas through establishment of a beyond-the-floor standard under section 7412(d)(2)?
11. Did EPA reasonably decline to grant a blanket extension to the compliance deadline for publicly-owned EGUs?
12. Did EPA lawfully decide to allow sources comprised of multiple contiguous units under common control to average their units’ emissions for compliance purposes where certain criteria are met?
13. Did EPA reasonably exercise its discretion under section 7661c(b) to designate alternative monitoring methods for non-mercury metals?

STATUTES AND REGULATIONS

Pertinent statutory and regulatory provisions are set forth in the addendum.

STATEMENT OF THE CASE

I. INTRODUCTION

Coal- and oil-fired power plants are a significant source of many hazardous pollutants, including mercury, arsenic, nickel, chromium, selenium and acid gases. These hazardous pollutants cause cancer, neurodevelopmental effects, and other serious adverse health effects. This case involves consolidated challenges to a national regulatory program to reduce emissions of hazardous pollutants from EGUs.

EGUs are by far the largest anthropogenic source of mercury emissions in the United States. Some of this mercury deposits into waterbodies, and people are then exposed to it by eating contaminated fish. Such exposure is of particular concern for children and women of child-bearing age, because high levels of exposure to mercury during pregnancy can adversely affect fetal brain and nervous system development. EPA has estimated that millions of women in the United States of child-bearing age are being exposed to mercury, through eating contaminated fish, at a level capable of causing adverse developmental effects in their children. 65 Fed. Reg. 79,825, 79,829/3 (Dec. 20, 2000).

In the 1990 CAA amendments, Congress was concerned with EPA’s failure to regulate hazardous pollutants sufficiently and responded by extensively revising section 7412. As relevant here, Congress required EPA to study hazards to public health reasonably anticipated to occur as a result of hazardous pollutant emissions from EGUs that remained after imposition of other Act requirements. 42 U.S.C. § 7412(n)(1)(A). Congress then required EPA to regulate hazardous pollutants from EGUs under section 7412 should EPA determine that such regulation is “appropriate and necessary.” *Id.*

Based on extensive study and analyses, EPA has determined that regulation of coal and oil-fired EGUs under section 7412 is “appropriate and necessary” and has promulgated the emission standards at issue. The promulgated standards will secure substantial reductions in hazardous pollutant emissions from EGUs using controls that are readily available.

II. STATUTORY AND REGULATORY BACKGROUND

A. Hazardous Pollutant Regulation Under the CAA.

The CAA, 42 U.S.C. §§ 7401-7671q, enacted in 1970 and extensively amended in 1977 and 1990, is intended to “protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare.” 42 U.S.C. § 7401(b)(1).

Congress initially addressed the emission of hazardous pollutants when it first added section 7412 in 1970. Pub. L. No. 90-604, § 4(a), 84 Stat. 1676, 1685. The original section 7412 required EPA to identify and regulate hazardous pollutants when they were found to “cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.” 42 U.S.C. § 7412(a)(1) (1970). However, in the following 18 years, “EPA listed only eight [hazardous pollutants]” and “addressed only a limited selection of possible pollution sources.” *New Jersey v. EPA*, 517 F.3d 574, 578 (D.C. Cir. 2008).

Frustrated by EPA’s slow progress, Congress substantially amended section 7412 in 1990 to ensure that EPA would regulate hazardous pollutant emissions and would do so quickly, “eliminating much of EPA’s discretion in the process.” *Id.* These amendments included the identification of over 180 listed hazardous pollutants, and the imposition of “specific, strict pollution control requirements on both new and existing sources” of hazardous pollutants. *Id.*

As amended, there are two key aspects of section 7412 relevant here: (1) the listing of source categories for regulation, and (2) the promulgation of emission standards for listed source categories.

1. Listing of Source Categories.

The listing of a source category is a condition precedent to the requirement to promulgate emission standards under section 7412(d). *See* 42 U.S.C.

§§ 7412(c), (d). Section 7412 sets different criteria for listing depending on the nature of the source. The types of sources under section 7412 include “major sources,” “area sources,” and EGUs. *Id.* §§ 7412(a)(1), (a)(2), (a)(8). A “major source” is any stationary source or group of stationary sources at a single location and under common control that emits or has the potential to emit 10 tons per year or more of any hazardous pollutant, or 25 tons per year or more of any combination of hazardous pollutants. *Id.* § 7412(a)(1). A stationary source that is not a “major source” is an “area source.” *Id.* § 7412(a)(2). An EGU is any “fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale.” *Id.* § 7412(a)(8).

Congress required EPA to publish a list of categories of major and area sources by November 15, 1991, and revise the list periodically. 42 U.S.C.

§ 7412(c)(1). EPA must list major sources if they meet the definition of a major

source – *i.e.*, if a certain amount of hazardous pollutants are emitted from any source in the category on an annual basis. *Id.* § 7412(a)(1).¹

EGUs are treated differently. In section 7412(n)(1)(A), Congress directed EPA to conduct a study to evaluate the hazards to public health resulting from emissions of hazardous pollutants from EGUs, if any, that would reasonably be anticipated to occur following imposition of the requirements of the Act, and to report the results of such study to Congress by November 15, 1993. Congress further required EPA to regulate EGUs under section 7412 if EPA makes a determination that such regulation is “appropriate and necessary,” after considering the results of the study. 42 U.S.C. § 7412(n)(1)(A).

Congress in the 1990 amendments also required EPA to conduct two additional studies related to EGUs: (1) a study of mercury emissions from EGUs and other sources, and (2) a study to determine the threshold level of mercury

¹ By contrast, EPA is required to list categories and subcategories of area sources, if they meet one of the following statutory criteria: (1) EPA determines that the category of area sources presents a threat of adverse effects to human health or the environment in a manner that warrants regulation under section 7412; or (2) the category of area sources falls within the purview of section 7412(k)(3)(B) (the Urban Area Source Strategy). 42 U.S.C. § 7412(c)(3).

exposure below which adverse human health effects are not expected to occur. 42 U.S.C. § 7412(n)(1)(B) and (C).

2. Section 7412(d) Emission Standards.

EPA is required to establish, pursuant to section 7412(d), national emission standards for hazardous pollutants emitted by listed sources. 42 U.S.C.

§ 7412(c)(2). These standards are commonly referred to as “maximum achievable control technology” or “MACT” standards.

For any source category added to the list of categories to be regulated after November 15, 2000, EPA must promulgate emission standards within two years after listing. 42 U.S.C. § 7412(c)(5). Parties may not challenge EPA’s decision to add a source category to the list until EPA issues emission standards for that category. 42 U.S.C. § 7412(e)(4).

Section 7412(d)(3) specifies the minimum degree of emission control sources must achieve. Existing source standards for sources in categories or subcategories with 30 or more sources may not be “less stringent than . . . the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has emissions information).” *Id.*

§ 7412(d)(3)(A). Existing source standards for sources in categories or subcategories with fewer than 30 sources may not be less stringent than “the average emission limitation achieved by the best performing 5 sources.” *Id.*

§ 7412(d)(3)(B). This minimum level of emission control required is commonly called the “MACT floor.” *See Mossville Env'tl. Action Now v. EPA*, 370 F.3d 1232, 1235 (D.C. Cir. 2004).

Section 7412(d)(2) then directs EPA to set standards more stringent than the MACT floor where “achievable.” It grants EPA broad authority to require the application of controls in light of the factors listed in section 7412(d)(2), including “the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements.” Standards set under this subsection are commonly called “beyond the floor” standards. *Mossville*, 370 F.3d at 1235. EPA has discretion to set alternative standards for area sources based on the use of generally available control technologies or management practices. 42 U.S.C. § 7412(d)(5).

B. Hazardous Pollutants Emitted by EGUs.

EGUs emit numerous hazardous pollutants listed under section 7412. EGUs are by far the largest anthropogenic source of mercury emissions in the United States, responsible for over 50 percent of domestic emissions. 76 Fed. Reg.

24,976, 25,002, Table 3 (May 3, 2011). They are also the largest source of acid gases, emitting 82 percent of domestic hydrogen chloride emissions and 62 percent of hydrogen fluoride emissions. 76 Fed. Reg. at 25,005, Table 4. They are a significant source of many other hazardous metals, including selenium (83% of domestic emissions), arsenic (62%), nickel (28%), and chromium (22%). 76 Fed. Reg. at 25,006, Table 5.

Exposure to hazardous pollutants is associated with a variety of adverse health effects. For example, metals emitted by EGUs, including arsenic, chromium and nickel, cause cancer. 76 Fed. Reg. at 25,003-05. Mercury emitted from EGUs deposits into waterbodies and then bioaccumulates² in fish in the highly toxic form of methylmercury. 76 Fed. Reg. at 25,000/1. Larger predatory fish may have methylmercury concentrations on the order of one million times greater than the concentrations of methylmercury in the waterbody in which they live. *Id.* When people consume these fish, they consume methylmercury, which may cause adverse neurotoxic effects (*i.e.*, damage the brain and nervous system).

Methylmercury exposure is a particular concern for children, and in particular,

² Bioaccumulation occurs when an organism absorbs a toxic substance at a rate greater than it is lost.

fetuses, because their developing bodies are more highly sensitive to its effects. 76 Fed. Reg. at 24,977-78.

C. Regulatory Background.

In 1998, EPA completed the required section 7412(n)(1)(A) study (“the Utility Study”). EPA-HQ-OAR-2009-0234-3052 (JA XX). After considering the results of that study, as well as extensive additional scientific evidence, emissions data and other information, EPA published a determination on December 20, 2000, under section 7412(n)(1)(A), that regulation of hazardous pollutants from coal- and oil-fired EGUs is “appropriate and necessary.” 65 Fed. Reg. at 79,829/2. Based on that determination, EPA, on the same date, added coal- and oil-fired EGUs to the section 7412(c) list of source categories to be regulated. *Id.* at 79,831/1.³

EPA concluded in the 2000 determination that it is “appropriate” to regulate EGUs because, among other reasons, EGU mercury emissions pose a serious hazard to public health and the environment and because several other metals emitted by EGUs pose cancer risks. 65 Fed. Reg. at 79,827/3. EPA concluded that it is “necessary” to regulate EGUs because imposition of other requirements of the CAA will not address these hazards. *Id.* at 79,830/2.

³ Petitioners’ assertion (*see* Joint Br. 14, 27, 56 n.62) that EPA listed EGUs in 2002 is incorrect.

EPA failed to establish section 7412 emission standards within two years, as required by section 7412(c)(5). In 2005, a previous EPA Administrator attempted to reverse the 2000 determination and remove EGUs from the section 7412(c) list. 70 Fed. Reg. 15,994 (Mar. 29, 2005) (“the delisting rule”). EPA concluded at that time that it was “appropriate” instead to control EGU mercury emissions through section 7411 “standards of performance,” and EPA promulgated such standards in a separate rule. 70 Fed. Reg. 28,606, 28,609/3 (May 18, 2005) (“Clean Air Mercury Rule” or “CAMR”).

Numerous petitioners challenged the delisting rule and CAMR. This Court held that EPA’s 2005 delisting rule was unlawful because section 7412(c)(9) requires EPA to make certain specific findings before delisting a source category, which EPA concededly had not made. *New Jersey*, 517 F.3d at 578. The Court then also vacated CAMR, since EPA conceded that it had no authority to promulgate hazardous pollutant standards under section 7411 for sources on the section 7412(c) list.

Following *New Jersey*, EGUs remained on the section 7412(c) list, and EPA once again was obligated to promulgate section 7412(d) emission standards. Environmental and public health organizations subsequently filed suit in district court under 42 U.S.C. § 7604(a)(2), alleging that EPA had a nondiscretionary duty

to promulgate standards by December 20, 2002, and that the Agency was already many years late meeting its obligations. That suit resulted in a consent decree requiring EPA to promulgate now long-overdue section 7412(d) standards. 77 Fed. Reg. at 9308/2-3.

Prior to promulgating final standards, EPA developed a comprehensive Information Collection Request (“ICR”), a goal of which was to ensure that EPA had sufficient emissions information for purposes of setting standards. EPA considered industry comments on the scope of the ICR and made revisions to address concerns about the cost and time required to conduct emissions testing. 74 Fed. Reg. 58,012 (Nov. 10, 2009). EPA ultimately collected extensive emissions data from industry sources through a multi-phased ICR and considered these data in promulgating standards. 76 Fed. Reg. at 25,021-24. *See also* discussion, *infra* at 71-73.

D. The Final Rule.

EPA promulgated the long-overdue section 7412(d) standards, which are now under review, on February 16, 2012. 77 Fed. Reg. 9304.

1. Reaffirmation of the Section 7412(n)(1)(A) Determination.

As part of its final rule, EPA considered comments on its affirmative 2000 section 7412(n)(1)(A) “appropriate and necessary” determination and reaffirmed

that determination and its listing of EGUs. *Id.* at 9362-64. In reaffirming the determination, EPA considered substantial additional technical analyses and information that were not before the Agency in 2000. *Id.* The new technical analyses EPA considered as part of the reaffirmation included, among other things, a national-scale mercury risk assessment, and a set of 16 case studies of inhalation risks for pollutants other than mercury.

EPA also clarified in its rulemaking proposal its interpretations of certain key terms in section 7412(n)(1)(A), including the terms “appropriate” and “necessary.” 76 Fed. Reg. at 24,987-93. EPA explained that it believes that it is “appropriate” to regulate EGUs under section 7412 if the Agency determines that hazardous pollutant emissions from such units pose a hazard to public health or the environment. *Id.* at 24,992/2. EPA explained that it believes that it is “necessary” to regulate EGUs if the imposition of the other requirements of the CAA will not adequately address hazards to public health or the environment, or if there are other compelling reasons to regulate such emissions. *Id.* at 24,992/2-3. EPA explained why these interpretations are reasonable and superior to different interpretations that a previous EPA Administrator had set forth in support of the vacated 2005 delisting rule. *Id.* at 24,989/2-90/1, 24,992.

EPA also in the final rule denied a petition submitted by the Utility Air

Regulatory Group (“UARG”) for EPA to delist coal-fired EGUs from the section 7412(c) list of source categories to be regulated. *See* 77 Fed. Reg. at 9364-66.

2. The Final Emission Standards.

EPA created EGU subcategories in the final rule and set emission standards for all subcategories. For coal-fired EGUs, solid oil-derived fuel-fired EGUs, and integrated gasification and combined cycle EGUs, EPA set numerical limits for: (1) mercury; (2) hydrogen chloride, as a surrogate for acid gases; and (3) filterable particulate matter, as a surrogate for non-mercury hazardous metals. 77 Fed. Reg. at 9367. For liquid oil-fired EGUs, EPA set numerical emission limits for filterable particulate matter (as a surrogate for hazardous metals), hydrogen chloride and hydrogen fluoride. *Id.* EPA also established work practice standards for organic hazardous pollutants, including dioxins and furans, for all subcategories. 77 Fed. Reg. at 9369.

EPA set alternative equivalent numerical emission standards for certain pollutants for some subcategories (*e.g.*, SO₂ as a surrogate for all acid gas hazardous pollutants for coal-fired EGUs), in order to provide flexibility in the form of additional compliance options. *Id.* at 9368-70. EPA further allowed sources to comply with the numeric emissions standards by averaging units at their

facilities, under certain conditions, and to choose from multiple monitoring options to demonstrate compliance. 77 Fed. Reg. at 9370-72 and 9384-86.

3. The Regulatory Impact Analysis.

Consistent with Executive Orders 12866 and 13563, EPA estimated the costs and benefits of the final standards in a Regulatory Impact Analysis (“RIA”) (JA XX-XX). EPA projected in the RIA that the quantifiable net benefits of the promulgated standards would be \$24 to \$80 billion in 2016. 77 Fed. Reg. at 9306/1.

STANDARD OF REVIEW

Challenged portions of the final rule may not be set aside unless they are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 42 U.S.C. § 7607(d)(9). The “arbitrary and capricious” standard presumes the validity of agency action, and a reviewing court is to uphold an agency action if it satisfies minimum standards of rationality. *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 520-21 (D.C. Cir. 1983); *Ethyl Corp. v. EPA*, 541 F.2d 1, 34 (D.C. Cir. 1976) (*en banc*). Where EPA has considered the relevant data and articulated a rational connection between the facts found and the choices made, its regulatory choices must be upheld. *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

When reviewing scientific determinations within an agency's special expertise, a reviewing court must be at its most deferential. *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983). In reviewing EPA judgments regarding acceptable levels of risk, "EPA, not the court, has the technical expertise to decide what inferences may be drawn from the characteristics of . . . substances and to formulate policy with respect to what risks are acceptable." *NRDC v. EPA*, 824 F.2d 1146, 1163 (D.C. Cir. 1987) (citation and quotation marks omitted). This Court "will not second-guess a determination based on that expertise." *Id.*

Questions of statutory interpretation are governed by the two-step test set forth in *Chevron, U.S.A., Inc. v. NRDC* ("*Chevron*"), 467 U.S. 837, 842-45 (1984). The reviewing court must first determine "whether Congress has directly spoken to the precise question at issue." *Chevron*, 467 U.S. at 842. If the congressional intent is clear from the statutory language, the inquiry ends. *Id.* at 842-43. If the statute is silent or ambiguous, the reviewing court must accept the agency's interpretation if it is reasonable; the agency's interpretation need not represent the only permissible reading of the statute nor the reading that the court might prefer. *Id.* at 843 & n.11.

SUMMARY OF ARGUMENT

EGUs are the largest anthropogenic source of mercury emissions and a significant source of many other hazardous pollutants. In the 1990 CAA Amendments, Congress required EPA to regulate hazardous pollutant emissions from EGUs under section 7412 should EPA find such regulation to be “appropriate and necessary” after considering the Utility Study of hazards to public health posed by such emissions. 42 U.S.C. § 7412(n)(1)(A).

EPA has compiled exhaustive scientific information concerning public health and environmental hazards posed by emissions of hazardous pollutants from EGUs. EPA has reasonably exercised expert scientific judgment to determine, both initially in 2000, and again upon promulgating final standards in 2012, that regulation of hazardous pollutant emissions under section 7412 is “appropriate and necessary.” EPA has found, based on an extensive body of evidence and analyses, that EGUs pose hazards to both public health and the environment that will not be addressed through imposition of other requirements of the Act. Having reasonably determined that it is appropriate and necessary to regulate EGUs under section 7412, EPA has complied with the requirements of the Act by promulgating section 7412(d) emission standards for all hazardous pollutants emitted by EGUs.

EPA properly denied a petition to remove EGUs from the list of source categories to be regulated under section 7412, based on the failure of the petitioner to demonstrate that the delisting criteria in section 7412(c)(9) have been met.

EPA did not need to make an additional separate finding under section 7412(c)(3) prior to regulating EGUs that are “area sources.” Congress defined EGUs separately in section 7412(a)(8) without distinguishing between EGUs that are “major” or “area sources,” and mandated in section 7412(n)(1)(A) that EGUs be regulated under section 7412 if EPA makes a determination that it is “appropriate and necessary” to regulate EGUs. Further, EPA properly regulated petroleum coke-fired EGUs because EPA’s listing of EGUs includes these EGUs.

All of the specific standards for specific subcategories promulgated by EPA comport with section 7412(d) of the Act and were reasonably calculated using available data. Consistent with the requirements of section 7412(d)(3), EPA properly set a mercury standard for existing coal-fired units based on the average emission limitation achieved by the best performing 12 percent of the existing sources for which the Administrator had information. Likewise, EPA properly calculated appropriate section 7412(d)(3) floor standards for liquid-oil fired and solid-oil derived fuel-fired units. EPA also set an appropriate section 7412(d)(2) beyond-the-floor standard for units designed to burn low rank virgin coal.

EPA reasonably declined to exercise discretion to sub-categorize circulating fluidized bed (“CFB”) units given that CFB units have similar emissions profiles to other coal-fired units. EPA also reasonably declined to exercise discretion under section 7412(d)(4) of the Act to set alternative standards for acid gas emissions based on health thresholds because available data were insufficient to support the development of such standards. EPA further reasonably declined to establish beyond-the-floor standards for all coal-fired EGUs under section 7412(d)(2) that would have required these EGUs to switch to natural gas, and the natural gas company raising this issue lacks prudential standing. Finally, EPA reasonably declined to grant a blanket extension to the Rule’s compliance deadline for publicly-owned EGUs.

EPA’s decision to allow contiguous, commonly-controlled units within a source to average their emissions for purposes of demonstrating compliance with the emission standards was lawful. There is no inconsistency between this “averaging alternative” and either the minimum stringency requirements of section 7412(d)(3) or EPA’s authority to set “beyond-the-floor” standards under section 7412(d)(2). EPA also reasonably designated various alternative methods for monitoring emissions of non-mercury metals, consistent with its authority under section 7661c(b) of the Act.

ARGUMENT

I. EPA REASONABLY DETERMINED THAT IT IS “APPROPRIATE AND NECESSARY” TO REGULATE EGU HAZARDOUS POLLUTANT EMISSIONS.

EPA’s threshold determination that it is “appropriate and necessary” to regulate EGU hazardous pollutant emissions must be upheld, both because EPA’s initial 2000 determination is amply supported, based on the record before the Agency at that time and, independently, because EPA’s reaffirmation of that determination in 2012 is also amply supported, based on new analyses and information before EPA at the time of the final rule.

A. EPA’s 2000 Determination.

By December 2000, 10 years following enactment of the 1990 amendments, EPA had compiled extensive relevant information concerning hazards associated with EGU hazardous pollutant emissions. This information included, but was not limited to, analyses contained in the peer reviewed studies required by section 7412(n)(1)(A) and (B), as well as a Congressionally required National Academy of Sciences (“NAS”) study on the toxicological effects of methylmercury. *See* 65

Fed. Reg. at 79,826/3, 76 Fed. Reg. at 24,982-84.⁴ In the section 7412(n)(1)(A) Utility Study alone, EPA collected test data from 52 EGUs, conducted screening level assessments for 67 hazardous pollutants, conducted multipathway assessments for six priority pollutants, estimated emission and inhalation risks after imposition of requirements of the Act, and identified alternative control strategies for all hazardous pollutants emitted from EGUs. 76 Fed. Reg. at 24,982/2-3.

Consistent with Congress' own focus on mercury in the studies required by subsections 7412(n)(1)(B) and (C), EPA focused its 2000 determination on health hazards posed by mercury. Based on the evidence before it at the time, EPA made a number of material findings related to mercury, including the following:

(1) Approximately 60 percent of the total mercury deposited in the U.S. comes from U.S. anthropogenic air emissions; 65 Fed. Reg. at 79,827/2.

(2) EGUs are the largest source of domestic anthropogenic mercury emissions, emitting about 30 percent of U.S. anthropogenic emissions. *Id.* at 79,827/2.

(3) EGU mercury emissions deposit into water bodies, and then bioaccumulate in fish in the highly toxic form of methylmercury. *Id.* at 79,827/1.

⁴ The NAS Study evaluated the same issues as those required to be studied under section 7412(n)(1)(C) and was required by a 1999 appropriations report. 76 Fed. Reg. at 24,982.

(4) Children of women exposed to relatively high levels of methylmercury during pregnancy, through fish consumption, have exhibited a variety of developmental neurological abnormalities. *Id.* at 79,829/3.

(5) Approximately seven percent of women of childbearing age are exposed to methylmercury at levels that exceed a health-protective level, the methylmercury “Reference Dose.” *Id.*⁵

(6) A number of available control strategies are effective in reducing EGU mercury emissions. *Id.* at 79,830/1.

(7) Achieving incremental emissions reductions will lead to incremental reductions in fish tissue methylmercury concentrations, which will in turn reduce risks to public health. *Id.*

EPA additionally found that methylmercury can have serious toxicologic effects on wildlife. *Id.* Although it focused on mercury hazards, the Agency also found that cancer risks for several other metals emitted by EGUs were a potential concern for public health. *Id.* at 79,827/3.

Based on all of the foregoing findings, EPA reasonably determined in 2000 that regulation of hazardous pollutants from EGUs was “appropriate.” *Id.* at 79,830/2. In addition, EPA reasonably determined in 2000 that it was “necessary” to regulate EGUs, based on its conclusion that imposition of other requirements of

⁵ The methylmercury Reference Dose is an estimate of exposure above which there is an increased risk of adverse neurological effects in children. 77 Fed. Reg. at 9310/3

the CAA would not adequately address the public health and environmental hazards posed by such emissions. *Id.* at 79,830/2; 76 Fed. Reg. at 24,997, 77 Fed. Reg. at 9310, 9327-28. *See also NRDC v. EPA*, 824 F.2d at 1163 (holding that “EPA, not the court, has the technical expertise to decide what inferences may be drawn from the characteristics of . . . substances and to formulate policy with respect to what risks are acceptable.”) (citation and quotation marks omitted).

B. EPA’s 2012 Determination.

Although not required to do so, EPA reexamined its “appropriate and necessary” determination prior to promulgating final standards in 2012. EPA conducted and considered new robust analyses concerning the hazards posed by EGU emissions. These analyses confirmed that it remains “appropriate” and “necessary” to regulate EGU hazardous pollutant emissions. 76 Fed. Reg. at 24,999-25,018; 77 Fed. Reg. at 9310-64.

EPA reasonably affirmed that it remains “appropriate” to regulate EGUs under section 7412 because, among other reasons: (1) EGUs are by far the largest remaining domestic source of mercury and other hazardous pollutant emissions; (2) mercury and other pollutants emitted by EGUs pose hazards to public health and the environment; and (3) effective controls are available to reduce emissions. 77 Fed. Reg. at 9363, 76 Fed. Reg. at 24,999. EPA reasonably affirmed that it

remains “necessary” to regulate EGU hazardous pollutant emissions because, among other reasons, hazards to public health and the environment will not be addressed through imposition of other CAA requirements. *Id.*

We discuss below the most pertinent new analyses conducted by EPA to support its 2012 findings.

1. The Mercury Risk Assessment.

EPA conducted a national-scale quantitative assessment designed to address whether EGU mercury emissions pose a public health hazard. This assessment, which is set forth in a technical support document (the “Mercury TSD”) (JA XX), focused on assessing methylmercury exposure to women of child-bearing age who consume large amounts of family-caught freshwater fish, because the children of women who consume large amounts of such fish during pregnancy experience the highest risk attributable to EGUs. 76 Fed. Reg. at 25,007/3. EPA projected this subpopulation’s potential exposure to methylmercury in thousands of specific watersheds, and then compared this degree of exposure with the Reference Dose. 76 Fed. Reg. at 25,006-11; 77 Fed. Reg. at 9311-17.

EPA’s Mercury Assessment included the following methodological steps. First, EPA compiled extensive fish tissue data to estimate methylmercury concentrations in fish in over three thousand watersheds. Mercury TSD at 17-31

(JA XX-XX). Second, EPA identified fish consumption rates, using published data, for women of child-bearing age who rely on noncommercial fish as a major source of protein in their diet. *Id.* at 31-42 (JA XX-XX). Third, for this subpopulation of women, EPA projected the subpopulation's potential methylmercury exposure level within each watershed for which EPA had fish tissue data, and compared it to the Reference Dose. *Id.* at 43 (JA XX). Fourth, EPA estimated, using sophisticated air deposition modeling, the EGU contribution to methylmercury exposure levels in each watershed, after imposition of other Act requirements. *Id.* at 43-48 (JA XX-XX).

EPA's methodology was peer-reviewed by EPA's independent Science Advisory Board ("SAB"). The SAB concluded that it "support[ed] the overall design of and approach to the risk assessment" and found "that it should provide an objective, reasonable, and credible determination of the potential for a public health hazard from mercury emitted from U.S. EGUs." SAB Letter to EPA Administrator Jackson at 2 (Sept. 29, 2011), EPA-HQ-OAR-2009-0234-19689 (JA XX).

EPA applied two different metrics to identify watersheds with populations at risk from EGU-attributable methylmercury, after imposition of Act requirements. Mercury TSD at ix-x (JA XX-XX). First, EPA considered the number and percent

of modeled watersheds where EGU emissions *alone* (*i.e.*, without consideration of mercury deposition from other sources in that watershed) were projected to lead to methylmercury exposures exceeding the Reference Dose. Second, EPA considered the number of watersheds where total methylmercury exposures were projected to exceed the Reference Dose, and where EGUs were projected to contribute at least *five percent* of the total mercury deposition.

Applying these two metrics, EPA found: (1) in 10 percent of modeled watersheds, mercury deposition from EGUs alone results in projected methylmercury exposures exceeding the Reference Dose; and (2) in 24 percent of modeled watersheds, total methylmercury exposures exceed the Reference Dose, and EGUs contribute at least five percent of total mercury deposition. *Id.* Overall, 29 percent of the modeled watersheds exceeded either one or both of these two metrics. 77 Fed. Reg. at 9311/2.

Based on the hazards to public health from EGU mercury emissions found in the Mercury TSD, and the determination that hazards remain following imposition of other Act requirements, EPA reasonably reaffirmed its determination that it is “appropriate and necessary” to regulate EGUs under section 7412. 77 Fed. Reg. at 9363/1.

2. The Inhalation Risk Assessment for Hazardous Pollutants Other Than Mercury.

EPA's 2012 reaffirmation of the "appropriate and necessary" determination is amply supported by EPA's findings related to mercury hazards alone. But EPA's separate findings related to health hazards posed by other hazardous pollutants also provide independent support for EPA's 2012 reaffirmation of the "appropriate and necessary" determination.

EPA conducted a new analysis of health hazards posed by other hazardous pollutants emitted by EGUs. In this "Inhalation Risk Assessment" (JA XX), EPA selected individual EGU facilities as case studies. EPA performed a chronic inhalation risk assessment for each facility which included assessing the maximum lifetime cancer risk to individuals posed by emissions of specific pollutants. 76 Fed. Reg. at 25,011/2. As a benchmark for cancer risk, EPA applied a lifetime risk of cancer of greater than one in a million to the individual in the population who is most exposed to emissions of a pollutant from a facility. As EPA explained, application of this benchmark level was reasonable and consistent with Congress' specification of this same benchmark level for purposes of delisting source categories in section 7412(c)(9). 76 Fed. Reg. at 24,992-93.

EPA concluded that at six of the 16 case study facilities, cancer risks to exposed individuals exceeded one in a million. 77 Fed. Reg. at 9319.⁶ Based on its finding that at least one case study facility exceeds the benchmark level, EPA reasonably determined that it is “appropriate” to regulate EGUs under section 7412. *Id.* at 9363/2. EPA additionally reasonably determined that it is “necessary” to regulate these emissions considering other Act requirements. *Id.* at 9363/3.

3. Environmental Hazards.

As discussed above, EPA’s 2012 reaffirmation of the listing of EGUs is amply supported, independently, by either: (1) EPA’s findings related to mercury health hazards; or (2) EPA’s findings related to health hazards posed by other hazardous metals. EPA additionally found, however, based on new analyses, that it is independently “appropriate and necessary” to regulate EGUs based on environmental hazards posed by hazardous pollutants as well. 77 Fed. Reg. at 9363/2-3.

As in 2000, EPA found that EGU mercury emissions contribute to significant adverse impacts on fish and wildlife. For example, published studies

⁶ Four of the facilities had maximum risks posed by emissions of chromium, and two had maximum risks posed by emissions of nickel. *Id.* at 9363/1.

reported adverse reproductive effects for numerous fish species and numerous adverse effects to fish-eating bird species and mammals. 76 Fed. Reg. at 25,012-13.

EPA also concluded based on peer-reviewed scientific research that hydrogen chloride and other acid gases emitted by EGUs contribute to acidification of ecosystems. 77 Fed. Reg. at 9362/1-2, 9363/2. EGUs emit the majority of acid gases nationally. 76 Fed. Reg. at 25,005/3. These emissions, when combined with water in the atmosphere, can form an acidic solution, the deposition of which can exacerbate acidification effects already being experienced in many sensitive ecosystems across the country. *Id.* at 25,013/1-2, 25,016/3.

C. Petitioners’ Challenges to EPA’s “Appropriate and Necessary” Determinations Lack Merit.

Both EPA’s initial 2000 “appropriate and necessary” determination, and the Agency’s subsequent 2012 reaffirmation of that determination, reflect the reasonable application of EPA’s expert scientific judgment and are amply supported by peer-reviewed studies and other record evidence. We address below State, Industry and Labor Petitioners’ (“Joint Petitioners’”) scattershot attacks on these determinations, all of which lack merit.

1. The 2000 “Appropriate and Necessary” Determination is Valid.

We first address Petitioners’ two arguments – one substantive and one procedural – that address the 2000 determination.

a. EPA Adequately Characterized Mercury Health Risks in 2000.

Addressing the substantive challenge to the 2000 determination first (*see* Joint Br.” 13, 27, 49), EPA did, in fact, “undertake[] the work to characterize mercury health risks” prior to 2000. As discussed in Section I.A. above, EPA made a number of pertinent findings concerning health risks posed by mercury, which are all supported by a large and compelling body of empirical data and scientific evidence that were in the record before EPA at that time. This record included studies that Congress specifically directed EPA to prepare.⁷

Petitioners contend that section 7412(n)(1)(A) required EPA to more specifically “quantify the contribution of EGUs to methylmercury in fish.” Joint Br. 49. EPA, however, may reasonably exercise scientific judgment without

⁷ To the extent Petitioners cite to different analyses that EPA had conducted *prior* to enactment of the 1990 amendments (over 25 years ago), in an effort to undermine EPA’s 2000 findings, this is misplaced. *See* Joint Br. 5. After promulgation of the 1990 Amendments, EPA conducted new analyses specifically focused on mercury and other hazardous pollutant emissions from EGUs, as required by Congress. These analyses constituted the most recent and best source of information before the Agency in 2000.

needing to surmount purported quantitative hurdles that are nowhere to be found in the statutory text.

Indeed, this Court recently rejected a very similar argument. *See Coal. for Responsible Regulation v. EPA*, 684 F.3d 102, 122-23 (D.C. Cir. 2012) (“*CRR*”), *rehearing en banc denied*, 2012 WL 6621785 (D.C. Cir. Dec. 12, 2000). In *CRR*, the Court addressed a CAA provision directing EPA to determine whether greenhouse gases emitted by motor vehicles “may be reasonably anticipated to endanger public health or welfare.” 684 F.3d at 120. The Court held that EPA, in doing so, had no obligation to make particular quantitative findings preferred by petitioners. *Id.* at 122-23. The Court explained that “[w]hen EPA evaluates scientific evidence in its bailiwick, [the Court] ask[s] only that [EPA] take the scientific record into account in a rational manner.” *Id.* at 122. EPA did so in 2000, and no more is required. *See also Ethyl Corp.*, 541 F.2d at 28 (“Where a statute is precautionary in nature, the evidence difficult to come by, uncertain, or conflicting because it is on the frontiers of scientific knowledge, the regulations designed to protect the public health, and the decision that of an expert

administrator, [courts] will not demand rigorous step-by-step proof of cause and effect.”).⁸

b. EPA Complied With Applicable Procedural Requirements.

We next turn to Petitioners’ procedural argument concerning the 2000 determination. Petitioners posit that EPA was required to issue a notice of proposed rulemaking and comply with section 7607(d) rulemaking requirements *in advance* of that determination, in addition to complying with section 7607(d) rulemaking requirements upon promulgating a final reviewable rule. *See* Joint Br. 13, 27. They are wrong.

Congress in the 1990 Amendments generally “restricted the opportunities” for parties “to intervene in the regulation of [hazardous pollutant] sources,” reflecting Congress’ concern with EPA’s slow pace of hazardous pollutant regulation prior to that time. *New Jersey*, 517 F.2d at 578, 583. As relevant here, these restrictions included preclusion of any judicial review of the listing of a source category under section 7412 prior to the actual promulgation of emission standards. *See* 42 U.S.C. § 7412(e)(4); *UARG v. EPA*, No. 01-1074, 2001 WL

⁸ Petitioners’ assertion that EPA failed to describe “alternative control strategies” in its 2000 determination is also incorrect. Joint Br. 13. The 2000 determination contains an express discussion of alternative control strategies. 65 Fed. Reg. at 79,828-29.

935363 (D.C. Cir. July 26, 2001) (dismissing a challenge to the 2000 section 7412(n)(1)(A) finding and listing of EGUs as premature).

The section 7412(e)(4) limitation on judicial review indicates that EPA is not obliged to comply with notice-and-comment rulemaking requirements *in advance* of source category listing, but may instead solicit public comments and otherwise comply with section 7607(d) rulemaking requirements in connection with promulgating a final *reviewable* rule containing emission standards. There is no reason to believe that Congress intended to require EPA to provide more than one opportunity to comment on the listing of a source category (*i.e.*, both prior to listing and as part of the judicially reviewable final rulemaking). Thus, it is the Agency's longstanding interpretation that it is not required to engage in notice-and-comment rulemaking prior to listing source categories (*see, e.g.*, 61 Fed. Reg. 28,197, 28,198/2 (June 4, 1996)).⁹ As a practical matter, however, EPA in the case

⁹ EPA does not interpret section 7607(d)(1)(C) (*see* Joint Br. 7) as making EGU listing decisions subject to additional rulemaking requirements beyond those applying to a final reviewable rulemaking. Moreover, the reference in section 7607(d)(1)(C) to section 7412(n)(1) appears to be a scrivener's error. The pertinent language in section 7607(d)(1)(C), which also refers to nonexistent sections 7412(g)(1)(D) and (F), was transcribed from a preceding House Bill. *See* H.R. Rep. No. 101-490 at 607 (1990), *reprinted in* 2 A Legislative History of the Clean Air Act Amendments of 1990 at 3021, 3631 (Comm. Print 1993) ("Legis. Hist."). In that bill, section 7412(n) authorized EPA to adopt regulations concerning lakes and bays (Legis. Hist. at 3111-12), while EGUs were covered in section

of the 2000 determination *did* hold public meetings and provide opportunities for written comments in advance of listing EGU's. 65 Fed. Reg. 18,992 (Apr. 10, 2000); 65 Fed. Reg. 10,783 (Feb. 29, 2000), 60 Fed. Reg. 35,393 (July 7, 1995).

To the extent Petitioners believe the opportunities for comment provided in advance of the 2000 determination were insufficient, such concerns are now moot. Upon promulgating the final rule, which included an affirmation of the 2000 determination, EPA complied with all of the rulemaking requirements set forth in section 7607(d), including providing Petitioners with an opportunity to comment on all aspects of its 2000 determination. 76 Fed. Reg. at 25,078/1. Petitioners are not entitled to yet another comment period. In short, even if there were, for sake of argument, any procedural defect related to the 2000 determination, such error has now been cured. No remedy granted by this Court could redress Petitioners' purported procedural injury any more than the 2012 rulemaking has already done.

Further, nothing in *Thomas v. New York*, 802 F.2d 1443 (D.C. Cir. 1986), which is cited by Petitioners, entitles Petitioners to another comment period. *See*

7412(l) (*id.* at 3110-11). At conference, amendments to section 7412 originating in the House Bill were renumbered, so that EGU's were ultimately covered in section 7412(n), but Congress appears to have inadvertently failed to make any corresponding amendments to section 7607(d) reflecting this renumbering. *See Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1043 (D.C. Cir. 2001) (no effect need be given to language demonstrably at odds with Congressional intent).

Joint Br. 27-29. At issue in *Thomas* was whether a letter, regarding whether the United States was responsible for acid deposition in Canada, created a nondiscretionary duty for EPA to order States to abate emissions. The Court concluded it did not. The instant case does not present any issue concerning whether EPA has failed to perform an alleged nondiscretionary duty. Petitioners have had an opportunity to comment on the 2000 determination, and *Thomas* has no relevance here.

2. The 2012 Determination and EPA's Associated Statutory Interpretations Are Valid.

EPA's "appropriate and necessary" determination must be upheld based on EPA's 2000 findings, standing alone. But even if EPA had not made any findings in 2000, EPA's present emission standards *still* must be upheld, based on the renewed findings EPA made in 2012 on the record before it at that time. We address in this section Petitioners' assorted substantive and procedural arguments concerning EPA's 2012 findings, all of which lack merit.

a. EPA Has Authority to Reaffirm Its Listing of EGUs Based on Consideration of New Evidence.

Addressing Petitioners' procedural arguments first (Joint Br. 27), Petitioners contend that EPA's 2012 findings should be ignored on grounds that EPA "did not purport in the instant rulemaking to renew the earlier listing of EGUs." Joint Br.

27. They are wrong. EPA clearly did renew the earlier listing of EGUs in the final rulemaking. *See, e.g.*, 77 Fed. Reg. at 9366/3 (“the technical analyses the Agency conducted in support of the appropriate and necessary finding confirm that EGUs should remain a listed source category”).

Petitioners next contend that this Court’s decision in *New Jersey* has the “consequence” of precluding EPA from reaffirming an “appropriate and necessary” determination based on new information. *See* Joint Br. 26-27. They are again wrong. *New Jersey* considered only whether EPA has authority to *remove* EGUs from the list of source categories to be regulated under section 7412 without making the specific findings required under section 7412(c)(9). The Court concluded EPA lacked such authority. But nothing in *New Jersey* precludes EPA from acting to *reaffirm* an initial listing of EGUs based on consideration of new information and analyses. To the contrary, the Act plainly authorizes EPA to act to protect public health and welfare, whenever “appropriate” and “necessary,” from hazards posed by EGU pollutant emissions.

b. EPA Properly Considered the Mercury TSD.

Having dispensed with Petitioners' procedural arguments concerning the 2012 findings, we turn to Petitioners' assorted substantive arguments attacking the scientific underpinnings of EPA's 2012 findings, which also lack merit.

First, EPA properly considered the results of the peer-reviewed Mercury TSD. Contrary to Petitioners' suggestion (*see* Joint Br. 50-51), the SAB concluded that the Mercury TSD provided an "objective, reasonable, and credible determination of the potential for a public health hazard from mercury emitted from U.S. EGUs." SAB Letter at 2 (JA XX). The SAB "regard[ed] the design of the risk assessment as suitable for its intended purpose, to inform decision-making regarding an 'appropriate and necessary' finding for regulation of hazardous air pollutants from coal and oil-fired EGUs. . . ." *Id.*

The passage from the SAB's letter that is quoted by Petitioners to suggest the SAB did not have sufficient information to evaluate EPA's risk assessment is misleading. *See* Joint Br. 50-51. That passage relates solely to the adequacy of the *initial* information provided by EPA to the SAB and is immediately followed by a sentence confirming that the SAB was ultimately provided with sufficient

information. *Id.* at 1 (JA XX).¹⁰ Moreover, to the extent the SAB suggested after peer review that the draft TSD be revised to better describe key analytical methods and findings, EPA made appropriate revisions in the final TSD. *See* 77 Fed. Reg. at 9313-16.¹¹

Petitioners additionally mischaracterize and distort the findings of the Mercury TSD by conflating it for rhetorical purposes with EPA's entirely separate Regulatory Impact Analysis ("RIA"). *See* Joint Br. 51. The RIA was not prepared for, or considered, as part of EPA's "appropriate and necessary" determination. The RIA was separately prepared pursuant to Executive Orders to assess the costs and benefits of the emission standards ultimately promulgated. The RIA did not assess whether hazardous pollutants emitted by EGUs pose a public health hazard. It applied different analyses and assumptions than used in the Mercury TSD.¹²

¹⁰ EPA provided notice in the Federal Register of all the SAB meetings and those meetings were open to the public for comment and participation. 76 Fed. Reg. at 9312/1-2. The minutes of those meetings were also posted on the publicly accessible SAB web site. *Id.*

¹¹ Petitioners assert, without citing to anything in the record, that EPA "refuse[d] to grant the SAB's panel request that it be provided an opportunity to review the final TSD," (Joint Br. 51 n.54). EPA did not receive any formal request from the SAB to review the final TSD.

¹² The RIA also had no relevance with respect to the emission standards promulgated, which were governed by the criteria in section 7412(d).

The Mercury TSD was specifically tailored to evaluate the question, for purposes of the “appropriate and necessary” determination, of whether, absent regulation, EGU-attributable mercury emissions pose a hazard to public health.¹³ As recognized by the SAB after peer review, the methodology followed in the Mercury TSD was suitable for this purpose.

Furthermore, contrary to Petitioners’ assertion (Joint Br. 50), EPA *did* address its 2005 analysis and explained why the conclusions it reached at that time were badly flawed. *See* 76 Fed. Reg. at 25,019-20; Mercury TSD at 48-50 (JA XX-XX). EPA explained that it had erred in 2005 by, among other things: (1) failing to evaluate the cumulative health hazard arising from EGU emissions combined with other sources of mercury, 76 Fed. Reg. at 25,019; (2) wrongly assuming that populations other than Native Americans do not engage in fish consumption at subsistence rates, *id.* at 25,020; and (3) inappropriately discounting health hazards arising from methylmercury exposures above the Reference Dose. *Id.*

EPA also addressed Petitioners’ comments concerning the fact that U.S. EGU emissions do not comprise a high percentage of total global mercury

¹³ In contrast to the RIA, the Mercury TSD was not intended to, and did not purport to, calculate the “aggregate public health benefit” arising from ultimately promulgated emission standards. *See* Joint Br. 51.

emissions. *See* Joint Br. 8. As EPA explained, certain forms of mercury from EGUs deposit locally and regionally. 77 Fed. Reg. at 9339/1-2. Consequently, peer reviewed scientific literature shows that mercury emissions from EGUs significantly enhance mercury deposition and the response of ecosystems in the United States. 77 Fed. Reg. at 9339/2. Indeed, U.S. EGUs contributed up to 30 percent of total mercury deposition in some U.S. watersheds in 2005. Mercury TSD at 64 (JA XX), 76 Fed. Reg. at 25,009 (Table 7).

c. The Inhalation Risk Assessment Provided a Credible Analysis of Hazards Associated With Other Pollutants.

Petitioners' arguments concerning EPA's Inhalation Risk Assessment, which addressed health hazards posed by pollutants other than mercury, also lack merit.

i. The Cancer Risk Benchmark Level.

First, in evaluating what level of cancer risk poses a hazard, EPA properly considered the numerical cancer risk threshold set forth in section 7412(c)(9)(B)(i). *See* Joint Br. 34-36. Congress in section 7412(n)(1)(A) did not define the term "hazard to public health." Thus, Congress provided EPA with discretion to determine what *degree* of risk poses a hazard to public health. Exercising this discretion, EPA reasonably considered various factors in evaluating hazards to

public health, including considering whether individuals will be exposed to cancer risks above the benchmark level of concern set forth in section 7412(c)(9)(B)(i). 76 Fed. Reg. at 24,992-3.

In section 7412(c)(9)(B)(i), Congress precluded EPA from delisting source categories, where any source in the category emits hazardous pollutants which may cause a lifetime risk of cancer greater than one in a million to the most exposed individual. By precluding delisting where this benchmark level is exceeded, Congress made clear that, in its judgment, cancer risks from sources exceeding that level should remain subject to regulation under section 7412. It is reasonable for EPA to consider this benchmark level in its assessment of EGU hazards for purposes of determining whether it is appropriate to list EGUs under section 7412. *See* 77 Fed. Reg. at 9333-34; 76 Fed. Reg. at 24,992-93.

EPA's consideration of the "one in a million" benchmark does not result in EGUs being treated "the same as all other major source categories." *See* Joint Br. 35-36. Other major source categories must be included on the list of source categories to be regulated based solely on the amount of hazardous pollutants emitted, and EPA *may* remove a source category if it can make the findings required by section 7412(c)(9)(B). In contrast, in applying section 7412(n)(1), EPA applies various factors in deciding whether it is both "appropriate and

necessary” to include EGUs on the list of source categories to be regulated.

Among other factors, EPA considers whether unacceptable hazards will remain *after* imposition of other requirements of the Act. In contrast, imposition of other requirements of the Act are not considered when the Agency is listing any other major source category.

ii. Use of Certified Data.

Petitioners’ efforts to question the validity of the results of the Inhalation Risk Assessment are also unfounded. *See* Joint Br. 52. Based on the data before it, all of which had been certified by industry to be accurate, EPA properly determined that at six of 16 case-study facilities, emissions of hazardous pollutants posed a lifetime risk of cancer greater than one in a million to the most exposed individual. 77 Fed. Reg. at 9319/1.

Petitioners identify no errors in EPA’s methodology, much less demonstrate that the “modeling effort was infected with errors.” *See* Joint Br. 52. Without identifying any methodological errors, Petitioners speculate that, at some of the sources determined to pose excessive carcinogenic risks, chromium or nickel emissions data used in the assessment might not accurately reflect actual emissions performance at the sources due to possible “sample contamination.” *Id.* This speculation overlooks that sources themselves submitted emissions data, and that

these sources certified to EPA the accuracy of these data. EPA did not err in relying upon such certified data. Response to Comments (“RTC”) Vol. 1 at 187 (JA XX). If sources were concerned about their own data that they certified were accurate, they could have conducted additional testing after making any necessary corrections, during the ICR or the public comment period. They did not.¹⁴

Petitioners also attempt to cast doubt on EPA’s findings by suggesting, without citing to anything in the record, that nearly all hazardous pollutants emitted by EGUs are already captured by high-efficiency particulate matter control devices. Joint Br. 9. In fact, a number of EGUs operating today were built in the 1950s and 1960s and are using obsolete and inefficient particulate matter control technologies. 76 Fed. Reg. at 24,979/1, 24,992/1. EPA projected that use of high-efficiency control technology required by the standards will reduce particulate matter emissions from EGUs by 38 percent on average, resulting in reductions of approximately 430 tons of metals from EGUs per year. 76 Fed. Reg. at 25,015.

¹⁴ To the extent Petitioners attempt to rely in note 58 of their brief on different emissions data that were collected *after* the promulgation of standards, and that are *not* in the administrative record, this is improper. See 42 U.S.C. § 7607(d)(7)(A).

d. EPA Properly Considered Environmental Hazards.

EPA also properly examined environmental hazards posed by EGUs in making its “appropriate and necessary” determination. Contrary to Petitioners’ position (*see* Joint Br. 44-46), the broad grant of discretion to EPA in section 7412(n)(1)(A) allows EPA to consider such hazards.

Because section 7412(n)(1)(A) does not expressly address the issue, EPA’s interpretation that it may consider environmental hazards is assessed under step two of the *Chevron* test. *See Chevron*, 467 U.S. at 843. EPA is entitled to particularly substantial judicial deference under *Chevron* where Congress has used broad terms such as “appropriate” and “necessary” and has not defined these terms. *Cf. MetroPCS California, LLC v. FCC*, 644 F.3d 410, 412 (D.C. Cir. 2011) (noting FCC entitled to “substantial judicial deference” and “broad discretion” in determining under Communications Act what is in the “public interest” or “necessary”).

EPA’s interpretation that it may consider environmental hazards is reasonable and must be upheld.¹⁵ In contesting EPA’s interpretation, Petitioners

¹⁵ EPA has always interpreted section 7412(n)(1)(A) as allowing for some consideration of environmental hazards. *See* Joint Br. 44-45. The difference between EPA’s 2005 and 2012 interpretations is one of degree. EPA in its 2012 interpretation concluded that environmental effects may be considered as a primary

point to the language in section 7412(n)(1)(A) directing EPA to consider EPA's study of health hazards in making its determination. Joint Br. 44. But the fact that EPA must consider this study does not preclude EPA from considering additional evidence relating to environmental hazards. *Cf. Sierra Club v. EPA*, 325 F.3d 374, 377 (D.C. Cir. 2003) (finding that statute requiring EPA to promulgate rule "based upon" a required study did not require EPA to premise rule exclusively upon that study).¹⁶

Petitioners also note that environmental effects are expressly referenced elsewhere in section 7412, but not in section 7412(n)(1)(A). Joint Br. 45. However, the references to environmental effects in the surrounding statutory text actually lend considerable *support* to the reasonableness of EPA's interpretation. The general purpose of section 7412 is to minimize emissions of hazardous

criterion for regulating EGUs, even in the absence of a public health hazard, whereas EPA in 2005 believed it could consider environmental hazards so long as there was a public health hazard as well. Inasmuch as EPA in 2012 found that EGUs pose several separate public health hazards and relied on each public health hazard as an independent basis for its ultimate "appropriate and necessary" determination, the distinctions between EPA's 2005 and 2012 interpretations are immaterial here.

¹⁶ *Ethyl Corp. v. EPA*, 51 F.3d 1053 (D.C. Cir. 1995), which is cited by Petitioners, is distinguishable. In *Ethyl*, the provision at issue was unambiguously worded so as to leave EPA no discretion to consider factors other than a fuel additive's effects on vehicles meeting emission standards.

pollutants that pose *either* a threat of adverse human health effects *or* adverse environmental effects. *See, e.g.*, 42 U.S.C. § 7412(b)(2) (defining hazardous pollutants as “pollutants which present, or may present, . . . a threat of adverse human health effects . . . or adverse environmental effects”); 42 U.S.C. § 7412(n)(1)(B) (requiring EPA to study environmental effects of mercury emissions from EGUs).

Further, EPA clearly *must* consider environmental hazards from EGUs before it can properly remove EGUs from the list of source categories to be regulated. 42 U.S.C. § 7412(c)(9)(B)(ii). It would be highly incongruous for Congress to have required EPA to consider environmental hazards prior to delisting EGUs, if it actually intended to require EPA to disregard these same hazards in the initial listing decision.

Petitioners’ position that EPA is foreclosed from considering anything other than public health hazards is also inconsistent with their separate argument that EPA can interpret section 7412(n)(1)(A) as allowing for consideration of costs, even though costs are also not expressly referenced in that subsection. *See* Joint Br. 39-42. If EPA has discretion to interpret section 7412(n)(1)(A) to consider

costs, then EPA necessarily also has discretion to interpret the statute as allowing for consideration of environmental hazards.¹⁷

Finally, Petitioners badly mischaracterize EPA's findings in suggesting that EPA's "appropriate and necessary" findings could not be upheld absent consideration of environmental hazards. *See* Joint Br. 46. Even disregarding EPA's findings concerning environmental hazards, both the 2000 and 2012 determinations are amply supported based on EPA's independent findings related to public health hazards posed by mercury and other hazardous metals. *See, e.g.*, 77 Fed. Reg. at 9363/2; 65 Fed. Reg. at 79,830/2.

e. EPA's Findings Concerning Acid Gas Hazards Are Amply Supported.

EPA also had a "rational basis" for concluding that acid gases pose environmental hazards. *See* Joint Br. 54. Published scientific research demonstrates that EGU acid gas emissions can exacerbate acidification effects already being experienced in many sensitive ecosystems across the country. 76 Fed. Reg. at 25,013/2, 25,016/3. For reasons we address elsewhere, EPA properly considered environmental hazards such as acidification in making its "appropriate and necessary" determination (*see* Section I.C.2.d *supra*); EPA properly

¹⁷ As discussed in Section I.C.2.g. below, EPA reasonably declined to exercise discretion to consider costs.

considered the cumulative impact of EGU acid gas emissions when added to ecosystems already experiencing acidification (*see* Section I.C.2.f., *infra*); and EPA was not required to specifically quantify the precise contribution of EGU acid gas emissions to ecosystem acidification (*see* Section I.C.1.a., *supra*).¹⁸

f. EPA Properly Considered Cumulative Impacts.

EPA properly considered the cumulative health and environmental hazards posed by hazardous pollutant emissions from EGUs and other sources. 76 Fed. Reg. at 24,988. *See* Joint Br. 47-48. To the extent there is any ambiguity in the statute concerning whether EPA is authorized to consider such cumulative hazards, EPA's interpretation is reasonable and must be upheld. *See Chevron*, 467 U.S. at 843.

An individual who suffers adverse health effects as the result of the combination of EGU emissions of a hazardous pollutant and other emissions is still harmed, irrespective of whether emissions from EGUs *alone* would cause the same harm. 76 Fed. Reg. at 24,988/3. EPA's consideration of actual hazards that are posed in the real world by EGU emissions, when added to existing levels of

¹⁸ Contrary to Petitioners' characterization (*see* Joint Br. 53-54), EPA did not consider or rely upon benefits associated with reducing particulate matter in concluding that EGU acid gas emissions pose acidification hazards.

pollution, is reasonable.¹⁹ *See also* 42 U.S.C. § 7412(n)(1)(B) (requiring EPA to study cumulative effects of mercury emissions from EGUs and other sources).

Furthermore, even ignoring other sources, EPA’s “appropriate and necessary” determination is amply supported based on EPA’s findings regarding the health hazards posed by emissions from EGUs *standing alone*. *See, e.g.*, 77 Fed. Reg. at 9363/1 (reflecting EPA’s conclusion that the “10 percent of watersheds” identified in the Mercury TSD “with populations at risk due to U.S. EGU emissions *alone* is unacceptable”) (emphasis added); 77 Fed. Reg. at 9363/2 (reflecting EPA’s conclusion that emissions of other pollutants from EGUs alone pose a hazard to public health).

g. EPA Reasonably Exercised Discretion to Decline to Consider Costs Associated With Regulation.

EPA also reasonably declined to consider, as part of its “appropriate and necessary” determinations, costs associated with the emission standards ultimately

¹⁹ Petitioners cite to nothing in the legislative history of the 1990 Amendments that undermines the reasonableness of EPA’s cumulative effects or other interpretations. Petitioners, without citing anything in either the House, Senate or Committee reports, point several times to the isolated floor statements of one legislator, Congressman Oxley (*see* Joint Br. 30-31 46, 48). These statements, however, do not suggest that any of EPA’s challenged statutory interpretations are unreasonable. Moreover, the isolated statements of one legislator are not entitled to any weight anyway as they cannot be presumed to reflect the intent of the entire legislative body. *See, e.g., Castaneda-Gonzalez v. Immigration & Naturalization Serv.*, 564 F.2d 417, 424 (D.C. Cir. 1977).

promulgated under section 7412(d)(2). *See* Joint Br. 39-44. In section 7412(n)(1)(A), Congress provided EPA with broad discretion to determine whether it is “appropriate and necessary” to regulate hazardous pollutant emissions from EGUs. Congress expressly directed EPA to consider the results of a study of hazards to public health, but did not expressly direct EPA to consider costs.

In the absence of any statutory text expressly addressing the issue, EPA’s interpretation of section 7412(n)(1)(A) as not calling for cost consideration is reviewed under the second step of the *Chevron* test. EPA’s interpretation must be upheld so long as it is reasonable, and need not represent the only permissible reading of the statute, or the one the Court might prefer. 467 U.S. at 843 n.11.²⁰

EPA’s interpretation is reasonable and therefore must be upheld. The Supreme Court’s discussion in *Whitman v. American Trucking Associations*, 531 U.S. 457, 467-68 (2001), confirms the reasonableness of the agency’s position. In *Whitman*, the Supreme Court assessed whether EPA could consider

²⁰ We agree that *Michigan v. EPA*, 213 F.3d 663, 678 (D.C. Cir. 2000), which is cited by Petitioners, supports the proposition that EPA has discretion to interpret an ambiguous statutory provision as allowing for the consideration of costs. But applying *Chevron*, the fact that an agency might be *permitted* to adopt such an interpretation does not mean that an agency is *required* to do so. Here, EPA acknowledged that it had discretion to interpret section 7412(n)(1)(A) as allowing for the consideration of costs, and EPA explained why it was reasonably adopting a contrary interpretation. *See* RTC Vol. 1 at 29 (JA XX).

implementation costs in setting national ambient air quality standards under CAA section 109(b), 42 U.S.C. § 7409(b). In holding that Congress unambiguously barred EPA from considering costs of implementation under this provision, the Court explained that the CAA frequently expressly grants EPA the authority to consider costs, and the absence of a reference to costs in section 7409(b) should be read as indicating a bar on EPA's consideration of implementation costs in setting NAAQS. The Supreme Court stressed its refusal "to find implicit in ambiguous sections of the CAA an authorization to consider costs that has elsewhere, and so often, been expressly granted." *See also Am. Textile Mfrs. Inst. v. Donovan*, 452 U.S. 490, 510 (1981) ("[w]hen Congress has intended that an agency engage in cost-benefit analysis, it has clearly indicated such intent on the face of the statute.").

In section 7412(n)(1)(A), the absence of an express direction to consider costs likewise contrasts with CAA provisions in which EPA is either expressly permitted or required to consider costs. Thus, although the text of section 7412(n)(1)(A) is more ambiguous with respect to whether EPA has discretion to consider costs than the unambiguous language in section 7409(b), the discussion in *Whitman* confirms that EPA's interpretation of section 7412(n)(1)(A) is at a

minimum reasonable, and therefore must be upheld under the second step of the *Chevron* test.

The overall structure and framework of section 7412 adds further support to the reasonableness of EPA's interpretation. Under section 7412(c), EPA does not have discretion to consider costs in deciding whether to include any other source categories on the list of sources to be regulated. Likewise, EPA does not have discretion to consider costs in deciding whether to *remove* any source category, including EGUs, from the list of sources to be regulated. *See* 42 U.S.C. § 7412(c)(9). It would be quite incongruous for Congress to have intended for EPA to consider costs in deciding whether to list EGUs under section 7412(n)(1), where it has so clearly precluded EPA from considering costs in determining whether to delist EGUs following an initial positive determination.

Moreover, Congress expressly addressed the treatment of costs in specifying the criteria for setting the *level* of appropriate regulation under section 7412(d). Under the two-step process set forth in section 7412(d), Congress specified that all regulated source categories shall meet minimum “floor” standards premised on the average emissions reductions achieved by the best controlled sources in the category, without consideration of costs, with costs then considered in deciding whether more stringent “beyond-the-floor” standards are warranted. The fact that

Congress expressly addressed costs in the context of specifying the stringency of regulation, but did not address costs in providing EPA with broad discretion to determine whether to list and regulate EGUs in the first instance under section 7412(n)(1)(A), supports the reasonableness of EPA's interpretation.

Petitioners cite to a dictionary defining the word "appropriate" as something that is "suitable" or "proper." *See* Joint Br. 39-40. This dictionary definition of "appropriate" does not support Petitioners' argument. EPA may reasonably conclude that it is "suitable" or "proper" to regulate hazardous pollutant emissions from EGUs under the regulatory framework established by Congress, without considering costs, where EGUs pose hazards to public health and the environment that would otherwise go unaddressed.

Petitioners also point to language directing EPA, in the section 7412(n)(1)(A) Utility Study, to "develop and describe . . . alternative control strategies for emissions which may warrant regulation under this section." *See* Joint Br. at 42 n.38. Consistent with this direction, EPA assessed in the Utility Study various types of control technologies available to EGUs for reducing pollutant emissions. Congress did not, however, direct EPA to evaluate the *cost* of alternative control technologies in the Utility Study, and accordingly, EPA did not

assess control technology costs in the Utility Study. *See* Utility Study Chapter 13 (JA XX-XX).

Petitioners' characterizations of EPA's RIA in connection with this issue of statutory interpretation are misleading and immaterial. *See* Joint Br. 3-4, 43. The RIA, which was required by Executive Orders, assessed the costs and benefits of the standards that were ultimately promulgated pursuant to section 7412(d). The RIA, however, was completely unrelated to the section 7412(n)(1)(A) determination and had no bearing on that determination.²¹

For the reasons set forth above, EPA reasonably interprets section 7412(n)(1)(A) as not calling for, and certainly not requiring, the consideration of costs.

²¹ With respect to the RIA, EPA concluded that the quantifiable net benefits of the promulgated standards would be \$24 to \$80 billion in 2017. 77 Fed. Reg. at 9306/1. The RIA understates the direct benefits of hazardous pollutant reductions achieved by the promulgated standards, because there are numerous benefits associated with hazardous pollutant reductions that EPA was unable to quantify. 77 Fed. Reg. at 9428/3; RTC Vol. 2 at 623 (JA XX); RIA Chapter 4 (JA XX-XX).

II. AFTER LISTING EGUs, EPA PROPERLY PROMULGATED SECTION 7412(d) EMISSION STANDARDS FOR ALL HAZARDOUS POLLUTANTS EMITTED BY EGUs.

A. EPA Appropriately Promulgated Section 7412(d) Emission Standards After Listing EGUs.

EPA properly established section 7412(d) emission standards following EPA's determination that it is "appropriate and necessary" to regulate EGUs under section 7412 and listing of EGUs. Petitioners posit that after listing EGUs, EPA could have declined to establish section 7412(d) standards, and could have instead set less stringent standards under purported authority of section 7412(n)(1) alone. *See* Joint Br. 36-38. Petitioners' interpretation of EPA's authority cannot be reconciled with the unambiguous statutory text, and EPA's decision to establish section 7412(d) standards should be upheld under the first step of the *Chevron* test. To the extent there is any ambiguity in the statute, EPA acted reasonably in setting section 7412(d) standards, and EPA's interpretation should be upheld under the second step of the *Chevron* test.

In section 7412(n)(1)(A), Congress directed EPA to regulate EGUs "under this *section*" (emphasis added), should EPA determine "such regulation is appropriate and necessary." As this Court has recently affirmed, when Congress uses the word "section," it is presumptively referring to an entire section of the

U.S. Code, and Congress uses, successively, the terms “subsections, paragraphs, subparagraphs and clauses,” when referring to more specific parts. *Desert Citizens Against Pollution v. EPA*, 699 F.3d 524, 527 (D.C. Cir. 2012); *United States v. Hines*, 694 F.3d 112, 118 (D.C. Cir. 2012). Here, Congress’ juxtaposition of the terms “section,” “subsection” and “subparagraph” within section 7412(n)(1)(A) confirm that Congress was consciously following its usual practice and using the term “section” to refer to all of section 7412, including section 7412(d), which establishes the framework for promulgating emission standards “under this section.” 76 Fed. Reg. at 24,993/2; 77 Fed. Reg. at 9330/1.

Furthermore, this Court made clear in *New Jersey* that section 7412(n)(1) “governs how the Administrator decides to list EGUs” as a source category to be regulated, and that once EGUs are listed, they are subject to all of the requirements of section 7412, unless expressly stated otherwise. *New Jersey*, 517 F.3d at 582 (stating that “where Congress wished to exempt EGUs from specific requirements of section [7412], it said so explicitly”). Section 7412(d) establishes the framework for EPA to set standards for listed source categories. Congress did not expressly exempt EGUs from the requirements of section 7412(d). Therefore, once EGUs were listed pursuant to EPA’s section 7412(n)(1)(A) determination, EPA was required to promulgate standards consistent with the requirements of

section 7412(d), and not some less stringent standards under authority of section 7412(n)(1).

Petitioners point to the section 7412(n)(1)(A) requirement that EPA describe in the Utility Study “alternative control strategies for emissions which may warrant regulation under this section.” *See* Joint Br. 37-38. This provision relating to the contents of that study does not govern the framework for promulgating emission standards. Moreover, in that study, EPA reasonably interpreted the reference to “alternative control strategies” as a direction to EPA to identify the various types of *control technologies* available to EGUs for reducing hazardous pollutant emissions that may warrant regulation, not some mandate to examine different regulatory frameworks than the one Congress actually adopted for hazardous pollutant emissions. 77 Fed. Reg. at 9331/1; Utility Study, Chapter 13 (JA XX).²²

Furthermore, even if the statute were ambiguous as to whether EPA must promulgate regulations under section 7412(d) (and *New Jersey* makes clear that it is not), EPA’s decision to promulgate standards pursuant to section 7412(d)

²² Petitioners also point to the reference to section 7412(n) in section 7607(d)(1)(C). *See* Joint Br. 38. As discussed above in note 9, this reference appears to be a scrivener’s error. But if not construed as error, the reference can be read as referring to EPA’s authority to promulgate regulations under subsections other than (n)(1). *See* 42 U.S.C. § 7412(n)(3) (providing EPA with authority to promulgate certain control measures for publicly-owned treatment works).

following its “appropriate and necessary” determination is still reasonable and must be alternatively upheld under step two of the *Chevron* test. CAA section 7412(d) provides a concrete, Congressionally-sanctioned, framework for setting the level of emission standards for hazardous pollutant emissions. Section 7412(n)(1) does not. *See* 77 Fed. Reg. at 9332/2-3 (explaining EPA would still choose to establish section 7412(d) standards even if it had alternative authority to establish standards under section 7412(n)(1)).

B. EPA Properly Regulated All Hazardous Pollutants Emitted by EGUs Following Its “Appropriate and Necessary” Determination.

EPA also properly promulgated emission standards for *all* hazardous pollutants emitted by EGUs following EPA’s listing of EGUs as a source category to be regulated under section 7412. *See* Joint Br. 29-34. Again, this Court made clear in *New Jersey* that section 7412(n)(1) “governs how the Administrator decides to list EGUs” as a source category and that once EGUs are listed, they are then subject to all of the requirements of section 7412, unless expressly stated otherwise. 517 F.3d at 582.

Section 7412(d)(1) provides that “the Administrator shall promulgate regulations establishing emission standards for each category of major sources . . . of *hazardous air pollutants listed for regulation* pursuant to subsection (c) of this

section”) (emphasis added). *See also* section 7412(d)(2) (“Emission standards promulgated under this subsection and applicable to new or existing sources of hazardous air pollutants shall require the maximum degree of reduction in emissions *of the hazardous air pollutants subject to this section*. . . .” (emphasis added)). This Court has already addressed section 7412(d) in this regard and made clear that section 7412(d) establishes a “clear statutory obligation to set emission standards for each listed [hazardous pollutant]” emitted by major sources. *Sierra Club v. EPA*, 479 F.3d 875, 883 (D.C. Cir. 2007); *Nat’l Lime Ass’n v. EPA*, 233 F.3d 625, 634 (D.C. Cir. 2000).²³

Petitioners’ contention that, with respect to EGUs, EPA is authorized to set emission standards only for those pollutants specifically found to pose hazards, cannot be reconciled with *New Jersey* and *National Lime*. Petitioners contend that *National Lime* has no application to EGUs. Joint Br. 32. But nothing in *National Lime* suggests that EGUs can be treated differently than other major sources once

²³ Section 7412(n)(1) provides that “[t]he Administrator shall regulate [EGUs] under this section, if the Administrator finds such regulation is appropriate and necessary. . . .” Petitioners’ emphasis on the words “such regulation” does not help their cause. *See* Joint Br. 30. “Such regulation” refers to regulation “under this section.” Regulation “under this section” incorporates the requirement in section 7412(d) to regulate all hazardous pollutants emitted by listed major source categories.

they are listed for regulation.²⁴ Even more critically, Petitioners ignore this Court’s decision in *New Jersey*, which confirmed that EGUs are not exempt from other requirements of the Act, unless explicitly stated. *See* 517 F.3d at 582. Congress did not exempt EGUs from the requirements of section 7412(d), and therefore EGUs are subject to section 7412(d).

Petitioners’ argument largely relies on the fact that *prior to New Jersey*, EPA had advanced a different interpretation of EPA’s obligations. EPA, however, in this rulemaking squarely addressed why that prior interpretation is untenable: namely, it would contradict this Court’s decisions in *New Jersey* and *National Lime*. 77 Fed. Reg. at 9325-26; 76 Fed. Reg. at 24,993. EPA cannot ignore this Court’s decisions interpreting the Act.²⁵

²⁴ Congress defined EGUs separately without distinguishing between EGUs that are major or area sources. However, the vast majority of EGUs meet the definition of “major sources.” *See* MACT Floor Memo at 4, EPA-HQ-OAR-2009-0234-20132 (identifying total of 1280 EGUs) (JA XX), EPA-HQ-OAR-2009-0234-20063 (identifying 141 EGUs that are at potential area sources) (JA XX). Accordingly, EPA reasonably reads section 7412(d)(1) and (d)(2) to require regulation of all hazardous pollutants from EGUs.

²⁵ This Court in *New Jersey* not only vacated EPA’s prior rulemakings in their entirety, but in doing so, chastised the Agency for failing to give appropriate weight to the relevant statutory context here: namely, Congress’ concern “with the fact that EPA had failed for decades to regulate [hazardous pollutants] sufficiently.” 517 F.3d at 583 (citing *Nat’l Lime*, 233 F.3d at 634 S. Rep. No. 101-228, at 128, *reprinted in* 1990 U.S.C.C.A.N. at 3513).

Furthermore, EPA made clear that even if the statute were deemed ambiguous, EPA would still have reasonably elected to promulgate section 7412(d) standards for all hazardous pollutants emitted by EGUs. 77 Fed. Reg. at 9326/2. Congress in the 1990 Amendments required EPA to set minimum emission standards for each listed hazardous pollutant for each listed major source, without regard to the degree of hazard posed by specific emitted pollutants. Once EPA decided it was appropriate and necessary to regulate EGUs under section 7412 and listed EGUs, it was reasonable for EPA from that point forward to regulate all hazardous pollutants emitted by EGUs.²⁶

III. EPA PROPERLY DENIED UARG’S DELISTING PETITION.

EPA properly denied the petition of UARG requesting that EPA delete, pursuant to section 7412(c)(9)(B), coal-fired EGUs from the list of source categories to be regulated under section 7412. 77 Fed. Reg. at 9364-66. UARG did not demonstrate in its petition that EPA could make either of the findings that are both required under section 7412(c)(9)(B) before EPA can delist a source category: (1) that no source emits hazardous pollutants in quantities which may

²⁶ Petitioners once again point (Joint Br. 29-30) to the section 7412(n)(1)(A) requirement that EPA describe in the study “alternative control strategies for emissions which may warrant regulation under this section.” But this provision again relates just to the contents of the study and has no bearing on EPA’s obligations under section 7412(d) following the listing of EGUs.

cause a lifetime cancer risk of greater than one in a million to the individual in the population who is most exposed, and (2) that emissions from no source exceed a level which is adequate to protect public health with an ample of margin of safety.

Id. EPA further properly denied the petition as defective because it requested that EPA delist only a portion of the EGU source category. *Id.* at 9364/1. *See NRDC v. EPA*, 489 F.3d 1364, 1373 (D.C. Cir. 2007) (holding that EPA under section 7412(c)(9) may delist source categories, but has no discretion to delist subcategories).²⁷

IV. EPA WAS NOT REQUIRED TO MAKE AN ADDITIONAL FINDING PRIOR TO REGULATING EGUs THAT ARE AREA SOURCES.

Petitioners argue that, even if EPA’s “appropriate and necessary” determination was lawful, EPA’s emissions standards must be overturned because EPA failed to make an additional finding, under section 7412(c)(3), that EGUs that are “area sources” of hazardous pollutants warrant regulation alongside EGUs that are “major sources.”²⁸ Joint Br. 55-58.

²⁷ Petitioners cite an undated informal memorandum prepared by an EPA employee providing information on how to prepare petitions to delist source categories, and assert that EPA’s denial of UARG’s petition “does not follow” the memorandum. *See* Joint Br. 65. The undated memorandum cited is not a regulation and does not have any legal force.

²⁸ *See* pg. 6 *supra* (discussing definitions of “major source” and “area source”).

The Act does not require EPA to find that regulation is warranted twice before setting standards for area source EGUs. Section 7412(c) generally requires EPA to find that area sources “present[] a threat of adverse effects to human health or the environment . . . warranting regulation,” before listing and regulating them.²⁹ 42 U.S.C. § 7412(c)(1)-(3). However, this requirement is rendered superfluous for EGUs by the EGU-specific provisions of section 7412. EGUs are defined in section 7412(a)(8) as “any fossil fuel-fired combustion unit of more than 25 megawatts” that generates electricity for sale, making no distinction between area sources and major sources. Section 7412(n)(1)(A) requires EPA to regulate EGUs after an appropriate and necessary finding has been made. Requiring a second finding for area source EGUs under section 7412(c)(3) is illogical because the consequence of such a finding – regulation – is already mandated once EPA has made a section 7412(n)(1)(A) finding.³⁰ Put simply, Congress set a separate path

²⁹ Petitioners suggest that EPA never listed area source EGUs. However, the 2002 notice they cite simply “updated” the source category list based on prior agency actions, including EPA’s December 20, 2000 listing of EGUs pursuant to 7412(n)(1)(A). 67 Fed. Reg. 6521, 6522 (Feb. 12, 2002).

³⁰ Requiring a section 7412(c)(3) finding for area source EGUs would also be redundant given that the appropriate and necessary finding is at least equivalent to that finding. *Compare* 42 U.S.C. § 7412(c)(3) (area sources may be regulated where they present “a threat of adverse effects to human health or the environment . . .”) *with* 42 U.S.C. § 7412(n)(1)(A) (requiring EPA to assess hazards to public health anticipated to occur as the result of EGU emissions).

for the listing of EGUs. *See New Jersey*, 517 F.3d at 582 (“Section [7412(n)(1)] governs how the Administrator decides whether to list EGUs”).

Petitioners argue that “where Congress wishes to exempt EGUs from specific requirements of section 7412, it said so explicitly.” Joint Br. 58 (quoting *New Jersey*, 517 F.3d at 582). But that is exactly what Congress did by defining EGUs in a manner that includes both major and area sources and mandating that EGUs be regulated under section 7412 once an appropriate and necessary finding is made. At the very least, EPA’s conclusion that the Act does not require a second finding before area source EGUs can be regulated is a reasonable interpretation of the interplay between sections 7412(a)(8), 7412(n)(1)(A), 7412(c) and 7412(d). *See Chevron*, 467 U.S. at 843.³¹

Given that Congress defined EGUs to include both major and area sources, it was also reasonable for EPA to conclude that both should be considered when identifying the best performing sources on which emission standards should be based. Indeed, it was particularly appropriate for EPA to consider both when

³¹ We address Petitioners’ citation to *National Lime* (Joint Br. 56-57) in Section II.B above. EPA cited that case in support of its view that it should set standards for *all* hazardous pollutants emitted by EGUs, not in regard to the issue addressed here. *See, e.g.*, 77 Fed. Reg. at 9361/1.

setting standards here, given that they have similar emissions characteristics and employ similar controls. *See* 77 Fed. Reg. at 9438/2.³²

Petitioners also argue that EPA failed to explain why it applied MACT, rather than “generally available control technology” or “GACT,” standards to area source EGUs.³³ Joint. Br. 56. But EPA reasonably concluded that GACT standards were not warranted here for a number of reasons.³⁴ EPA found that “similar [hazardous pollutant] emissions and control technologies are found on both major and area sources,” such that “there is no essential difference between area source and major source EGUs with respect to emissions of [hazardous pollutants].” 77 Fed. Reg. at 9438/2. EPA further explained:

[T]he data . . . show that there is little difference between major and area source EGUs individually, and that generally the driver for whether a utility facility is major or area source depends on the

³² EPA recently used the same approach in another section 7412(d) rulemaking. *See* 75 Fed. Reg. 54,970, 54,987 (Sept. 9, 2010) (setting hazardous pollutant standards for the Portland cement manufacturing industry).

³³ The Act gives EPA the *discretion* to require GACT, rather than MACT, for area sources. 42 U.S.C. § 7412(d)(5) (EPA “may . . . elect to promulgate” GACT standards “in lieu of” MACT).

³⁴ EPA addressed this issue at great length in the proposed rule, its Response to Comments, the final rule, and a technical support document. *See* 76 Fed. Reg. at 25,020-21; RTC Vol. 1 at 253-67 (JA XX-XX); 77 Fed. Reg. at 9402-03; EPA-HQ-OAR-2009-0234-20063 (“the Agency examined whether it would be appropriate to . . . issu[e] GACT standards”) (JA XX).

number of EGUs located at the facility . . . not on any inherent difference between the EGUs themselves.

Id. at 9404/2. EPA also observed that the majority of area source EGUs “were, in fact, major sources prior to installing controls,” *id.*, which indicates that there is no fundamental difference between the emission reductions that can be achieved by area sources as opposed to major sources. Finally, the fact that “a number of area sources . . . are high emitters of [mercury] and non-[mercury] metal hazardous pollutants” further supports EPA’s decision to require area source EGUs to meet MACT standards, rather than less-stringent GACT standards, because those pollutants pose hazards to public health. *Id.* at 9404/2. Therefore, EPA reasonably exercised its discretion to apply MACT standards to all regulated EGUs.

V. EPA’S “APPROPRIATE AND NECESSARY” DETERMINATION APPLIES TO PETROLEUM-COKE UNITS.

EPA’s “appropriate and necessary” determination and listing of coal- and oil-fired EGUs encompasses solid oil-derived fueled units, a subcategory which includes petroleum-coke units. Accordingly, contrary to the argument raised in the industry supplemental brief (*see* Supp. Ind. Br. 12-13), EPA appropriately promulgated regulations for petroleum-coke fueled units. *See* 77 Fed. Reg. at 9489-90, 9493.

As an initial matter, Petitioners' claim that EPA failed to make an "appropriate and necessary" finding with respect to petroleum-coke units was not raised in comments before the Agency, so this argument has been waived. 42 U.S.C § 7607(d)(7)(B); *Nat'l Elec. Mfrs. Ass'n v. EPA*, 99 F.3d 1170, 1171 n.1 (D.C. Cir. 1996). But even if this argument had not been waived, EPA properly promulgated standards for these units.

Petroleum-coke is a by-product resulting from the thermal cracking of oil during the petroleum refining process, and can be used as a fuel. 76 Fed. Reg. at 25,093/1; 77 Fed. Reg. at 9486. Thus, petroleum-coke is a petroleum-derived fossil fuel, and is subsumed within the listed coal- and oil-fired EGU source category. Where EPA chose not to list particular types of EGUs in the 2000 determination, it clearly expressed its intent. For example, when review of the Utility Study indicated that emissions of hazardous pollutants from natural gas-fired EGUs were negligible, EPA clearly stated that natural-gas units would not be regulated. 65 Fed. Reg. at 79,831. There is no such clear exclusion of units using petroleum-derived fuels.

Indeed, the Utility Study included a petroleum-coke fired unit. Utility Study at 3-16. EPA also included petroleum-coke fired units in its information collection effort to support the Rule. 76 Fed. Reg. at 25,022/3 and 25,024/3. Moreover, in its

2011 rulemaking proposal, EPA specifically proposed standards for solid oil-derived fuels, 76 Fed. Reg. at 25,126, 25,128, and found it was “appropriate and necessary” to regulate the units for which standards were being proposed. 76 Fed. Reg. at 24,978/3.

Further, Industry Petitioners’ reliance on EPA’s 2004 rulemaking proposal is unavailing. The portion of the proposed rule on which Petitioners rely was never finalized. Though the Agency did characterize petroleum-coke as a “non-regulated” fuel in describing how it proposed to consider blended fuels, 69 Fed. Reg. 4652, 4674/2 (Jan. 30, 2004), it did not explain the basis for that characterization. These statements also do not affect the scope of the 2000 listing; that listing stands on its own. 65 Fed. Reg. at 79,825. Finally, EPA’s 2011 rulemaking proposal eliminated any ambiguity as to whether EPA considers it “appropriate and necessary” to regulate solid oil-derived fuels, by proposing standards for such fuels and confirming that it remains “appropriate and necessary” to regulate coal- and oil-fired EGUs under section 7412. 76 Fed. Reg. at 24,978/3.

VI. THE EXISTING SOURCE MERCURY EMISSION STANDARD FOR COAL-FIRED UNITS IS CONSISTENT WITH THE CAA.

EPA promulgated appropriate standards for mercury emissions from existing coal-fired units. Petitioners’ challenge to these standards rests on a pair of false

premises. First, Petitioners claim that EPA is limited to either designing an information collection request (“ICR”) that selects units on a “purely random” basis, or selects only the best-performing units for sampling. Joint Br. at 58. However, the CAA does not require EPA to set MACT standards based on a purely randomized data set; instead, it directs EPA to base such standards on the performance of sources “for which the Administrator has emissions information.” 42 U.S.C. § 7412(d)(3)(A). Second, Petitioners claim that EPA selected only the best controlled sources for mercury. *Id.* at 59. The record does not support their claim.

EPA, in its ICR, did not target the best performing sources for mercury because the Agency did not believe it could identify such units. RTC Vol. 1 at 573-76 (JA XX-XX) (explaining difficulties associated with identifying mercury best performers for data collection purposes); ICR Supporting Statement Part B at 6-7 (EPA-HQ-OAR-2009-0234-0103) (JA XX-XX). Instead, the Agency collected data from a wide range of sources, and, for mercury, set a standard based on the average emission limitation achieved by the best-performing 12 percent of sources for which it had emissions information, as required by section 7412(d)(3)(A).

Petitioners argue that EPA tested the best performers for mercury and erred by not setting the mercury MACT floor based on the average emission limit achieved by the top 12 percent of the entire source category. Joint Br. at 58-59. Petitioners further contend that EPA based the floor for non-mercury metals on 12 percent of the entire EGU population, and that it was compelled to do the same for mercury. Petitioners are wrong, however. As discussed below, EPA could not reasonably take Petitioners' preferred approach for two reasons: (1) in the ICR, EPA could not and did not target the best performing sources for mercury; and (2) record data showed that the best performing sources for non-mercury metals were not the same as the best performing sources for mercury. EPA reasonably set the mercury MACT floor based on the average emission limitation achieved by the best performing 12 percent of sources for which it had emissions information.

A. EPA Collected a Substantial Amount of Mercury Data.

Prior to promulgating standards, EPA collected mercury emissions data from a wide range of sources through a comprehensive ICR.³⁵ Part II of that ICR required every coal- and oil-fired EGU to submit *all* available emissions data

³⁵ EPA provided the public two different opportunities to comment on the proposed ICR. 76 Fed. Reg. at 25,022/2. *See, e.g.*, UARG Comments at 24 (EPA-HQ-OAR-2009-0234-0017) (JA XX). EPA considered these comments and made several changes in response, including not requiring certain units to test. ICR RTC at 30-42 (JA XX-XX).

obtained between January 1, 2005 and December 31, 2010, including mercury emissions data. *See* ICR Supporting Statement Part A at 9 (EPA-HQ-OAR-2009-0234-0102) (JA XX); ICR Supporting Statement Part B at 30, 32 (EPA-HQ-OAR-2009-0234-0103) (JA XX, XX). In Part III of the ICR, EPA also required testing for randomly selected units and other units that it believed were the best performing sources for *non-mercury* metals, acid gas, and organic hazardous pollutants. ICR Supporting Statement Part B at 2, 7 (JA XX, XX).

With respect to Part III of the ICR, EPA believed it could identify the best performing sources for non-mercury metal hazardous pollutants. RTC Vol. 1 at 573-75 (JA XX-XX), 76 Fed. Reg. at 25,022/2. Based on that belief, EPA required sources identified as best performers for non-mercury metals to conduct stack testing of their non-mercury metal emissions and for particulate matter (which serves as a surrogate for control of non-mercury metals). *Id.* For purposes of efficiency, EPA additionally determined that the units believed to be the best-performing sources for non-mercury metal control should also test for mercury emissions. EPA at the time believed the testing methods for particulate matter and mercury emissions were similar, and thus additional mercury emissions data could be acquired cost-effectively from units being tested for particulate matter. MACT Floor Memo at 4 (EPA-HQ-OAR-2009-0234-20132) (JA XX). This was *not* an

attempt, however, to target best performers for mercury control or to imply that the best performers for particulate control are also the best performers for mercury control. In fact, the data collected reflect that some of the best-performing units with respect to particulate matter control are among the worst performing units for mercury control. *See* MACT Floor Analysis Spreadsheets (EPA-HQ-OAR-2009-0234-20132) (JA XX). Additionally, the data reflect that many of the mercury best performers (32 of the best-performing 126 units) are not drawn from the pool of units that were targeted in Part III of the ICR as particulate matter best performers. RTC Vol. 1 at 575 (JA XX).³⁶

The Proposed Rule made clear that EPA intended to set mercury standards based on the top 12 percent of the data obtained. 76 Fed. Reg. at 25,023/1. If

³⁶ The presence of 73 percent of EGUs equipped with activated carbon injection in the data pool is not indicative that EPA targeted mercury best performers, as Petitioners contend. Joint Br. at 60. If EPA had believed it could identify the best performers for mercury as sources equipped with activated carbon injection, EPA would have required 100 percent of sources equipped with activated carbon injection to conduct stack testing. In any case, Petitioners are incorrect in assuming sources with installed activated carbon injection would necessarily be the best performers, given that some sources equipped with activated carbon injection were among the worst mercury controlled sources. *See e.g.*, MACT Floor Analysis Spreadsheets attachment a2_Coal_Hg_MACT_floor_analysis_121611, tab “Hg_Data_>8300_Btulb,” rows 365, 344, and 326 (presence of activated carbon injection is indicated either in column X as “control_type_1” or column AA as “control_type_2” (EPA-HQ-OAR-2009-0234-20132) (JA XX). Additionally, some sources do not optimize mercury reductions by using that technology to its fullest extent. *Infra* fn. 42.

regulated sources believed EPA's proposed mercury standard was based on data that would skew the standard too low, they could have provided additional mercury data during the comment period. EPA, however, received very little new mercury data in response to the Proposed Rule.

B. EPA Properly Set the Existing Source Mercury Standard Based On the Top 12 Percent of Available Data.

EPA acted reasonably in calculating the mercury floor standards for existing sources. The mercury data pool was large – EPA collected mercury data from more than 35 percent of the sources in the coal-fired population. Mercury emissions data collected through the ICR included: (1) data from the 170 sources that EPA believed were best controlled sources for non-mercury metal hazardous pollutants; and (2) data from 218 units that were not identified as potential best performers for non-mercury metals (168 units from Part II of the ICR and 50 units randomly selected from units not identified as a best performers for any hazardous pollutant). *See generally* MACT Floor Analysis Spreadsheets (JA XX); ICR Supporting Statement Part B at 7-8 (EPA-HQ-OAR-2009-0234-0103) (JA XX-XX).

As discussed above, EPA could not have targeted the mercury best performers for stack testing, because the Agency could not identify the mercury

best performers prior to issuance of the ICR. Moreover, the data collected through the ICR showed that units with the best particulate controls were not consistently the units with the best mercury controls, and data from some of the 50 randomly selected units that were not presumptive best performers for any pollutant were among the best controlled sources for mercury. *Supra* fn. 41; RTC Vol. 1 at 575 (JA XX); ICR at 93-95 (EPA-HQ-OAR-2009-0234-0103) (JA XX). These facts confirm that the set of the best controlled sources for mercury are not the same set as the best controlled sources for non-mercury metals.³⁷ Accordingly, the Agency set a mercury MACT floor based on the average of the top 12 percent of all of the available mercury data before it. MACT Floor Memo at 4 (JA XX). This approach follows the statutory direction set out in section 7412(d)(3).

C. The Best-Performing Sources for Non-Mercury Metals Were Not The Best-Performing Sources for Mercury Control.

Petitioners' position that EPA designed its ICR to test only best-performing units for mercury control is misplaced. Joint Br. at 59. Petitioners point to a November 5, 2009, statement in which EPA stated that it believed units with the

³⁷ Petitioners were on notice at the time of the ICR that EPA would only base standards on 12 percent of the source category if the data supported that approach. *See* OMB Supporting Statements at 2 (EPA-HQ-OAR-2009-0234-0062) (JA XX); (EPA-HQ-OAR-2009-0234-0103) (JA XX).

latest particulate controls were “among the top performers with respect to [mercury] emissions.” ICR RTC at 27 (JA XX). But as EPA subsequently made clear, this statement was incorrect – EPA did not, and does not, believe that the best controlled sources for non-mercury metals are the top performers with respect to mercury emissions. *See* RTC Vol. 1 at 575 (“EPA did not select the units required to test for [mercury] and non-[mercury] metal [hazardous pollutants] for testing based on a presumption that they would be among the ‘best performing’ units for [mercury] and any statements made that imply that we could identify the best-performing sources for [mercury] are not well founded.”) (JA XX). *See also* 76 Fed. Reg. at 25,023/1.

As EPA explained, although particulate matter control is a suitable proxy for control of non-mercury metal hazardous pollutants, it is *not* a suitable proxy for control of mercury. RTC Vol. 1 at 749 (JA XX). Mercury is different than other metals because, although EGUs can emit mercury bound to particulate matter, mercury can also be present as a vapor (either as elemental vapor or an ionic gas), and the form of mercury has a significant impact on which control technologies are most effective. 76 Fed. Reg. at 25,014/1. EPA found that controls for particulate matter are very effective for the capture of particulate-bound mercury, but generally are much less effective for the control of other forms of mercury, such as

elemental vapor and reactive gaseous mercury. *Id.* Accordingly, EPA determined that particulate control technology alone is very unlikely to provide the best level of mercury control because it does not target the control of gaseous forms of mercury. *See* 76 Fed. Reg. at 25,024/1; ICR Supporting Statement Part B at 6-7 (JA XX, XX).

Under these circumstances, Petitioners’ proposed regulatory approach – (*i.e.* basing the existing source mercury limits on data from sources representing 12 percent of the entire population of EGUs rather than 12 percent of the data actually before the Agency) – would have been inconsistent with the requirements of section 7412(d)(3). Inasmuch as EPA could not otherwise identify the units representing the best-performing 12 percent of sources, EPA’s development of the MACT floor for mercury based on 12 percent of the sources for which the Agency had mercury data was not only reasonable, but compelled by section 7412(d)(3), and should be upheld. *See Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999) (“EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem”); *Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1004 (D.C. Cir. 1997) (EPA need not “invest [in] the resources to conduct the perfect study” before taking action.).

D. The Mercury Standard Is Not Overly Stringent.

Petitioners imply that EPA's approach for establishing the mercury MACT floor resulted in a mercury standard that is too stringent. In fact, however, EPA has collected reliable mercury emissions data for 388 sources, and all available ICR data for more than 150 of those 388 sources show emission levels in compliance with the Final Rule's mercury standards.³⁸ *Compare* 77 Fed. Reg. 9490 at Table 2 (setting standards) *to* MACT Floor Analysis Spreadsheet A2 (indicating that more than 150 sources have met mercury limits in all reported measurements) (JA XX).³⁹ Those 150 sources comprise approximately 15 percent of the category. Thus, the record belies Petitioners' suggestion that the standard is overly stringent.⁴⁰

³⁸ Additionally, commenters repeatedly cite a survey indicating that 60 percent of coal-fired units for which the Agency has mercury data are already able to comply with the standard. 77 Fed. Reg. at 9415/2.

³⁹ This set of 150+ sources consists of EGUs that appear to be able to achieve the existing source mercury standard for every set of data submitted to EPA. The MACT Floor Analysis Spreadsheet A2 is a summary of the best 3-run average data for each source, but this statement holds true when comparing the mercury standard to all raw data submitted to EPA. The 150+ sources resulted from a comparison of the source data to the mercury emission standard. The source data are voluminous, but available at the "MATS ICR Data" section of <http://www.epa.gov/ttn/atw/utility/utilitypg.html>.

⁴⁰ Industry Petitioners' reference to a conversion error is a red herring. Joint Br. 60-61. EPA admitted that there was a conversion error in the proposed rule,

VII. EPA PROMULGATED APPROPRIATE EMISSIONS STANDARDS FOR EACH SUBCATEGORY.

Certain Industry Petitioners challenge standards set for sources in various subcategories. Supp. Ind. Br. 8-16. EPA followed the statutory dictates set forth in section 7412(d) and set reasonable standards for each of these subcategories.

A. The Emission Standards for EGU's Designed to Burn Low Rank Coal Are Achievable and Properly Calculated.

1. The Mercury MACT Floor for this Subcategory Was Properly Calculated.

Rather than developing an argument challenging EPA's MACT floor for the low rank virgin coal subcategory,⁴¹ Petitioners simply assert three claimed flaws in perfunctory fashion, and attempt to incorporate by reference several pages of comments to EPA. Supp. Ind. Br. 11-12. This undeveloped and superficial argument is insufficient on its face. *See* Fed. R. App. P. 28(a)(9) (instructing that a component of the brief is "the argument, which must contain . . . [the] appellant's contentions and the reasons for them [.]"); *Am. Wildlands v. Kempthorne*, 530 F.3d

corrected that error, and commenters recognized that the error was fixed. RTC Vol. 1, at 582–83 (JA XX-XX). After correction of the error, sources not identified as best performers for non-mercury metals remained in the mercury MACT floor.

⁴¹ Low rank virgin coal refers to coal with a low calorific value. 77 Fed. Reg. at 9369/3. Petitioners refer to low rank coal as "lignite."

991, 1001 (D.C. Cir. 2008) (rejecting an argument raised only in a “fleeting statement”); *Ry. Labor Executives' Ass'n v. U.S. R.R. Ret. Bd.*, 749 F.2d 856, 859 n. 6 (D.C. Cir. 1984) (declining to resolve an issue that “consisted of only three sentences in the [appellant's] brief and no discussion of the . . . relevant case law”).

In any event, EPA properly calculated the MACT floor based on the average emission limitation achieved by the best-performing 12 percent of sources in the subcategory for which the Administrator had information. *See* 42 U.S.C. § 7412(d)(3)(A); MACT Floor Memo at 3-9 (JA XX-XX). EPA did not “cherry pick” data, as Petitioners argue. Supp. Ind. Br. 12. Quite to the contrary, EPA sorted all available data from the ICR to determine the lowest level of emissions achieved for each unit within the subcategory. *See* MACT Floor Memo at 10 (JA XX). Once the top performing 12 percent of sources was determined, EPA considered all available data, including higher data measures that Petitioners claim were ignored, to determine the MACT floor. *Id.*; RTC Vol. 1 at 559-60, 601 (JA XX-XX, XX).

EPA accounted for variability by applying an upper prediction limit. 76 Fed. Reg. at 25,041/2; RTC Vol. 1 at 458 (JA XX); MACT Floor Memo at 3-9 (JA XX-XX). An upper prediction limit is derived to account for the range of likely future values based on past data. 76 Fed. Reg. at 25,041. EPA’s upper prediction

limit in the Final Rule was calculated to allow, to a 99 percent degree of confidence, that any given future three-run test average would fall at or below the upper prediction limit value. *Id.* This is just the sort of evaluation of complex scientific data within the agency’s technical expertise for which this Court should be “extremely deferential” in its review. *New York v. Reilly*, 969 F.2d 1147, 1152 (D.C. Cir. 1992).

2. EPA’s Beyond-the-Floor Standard for this Subcategory is Achievable.

EPA properly set an “achievable” beyond-the-floor standard for the low rank virgin coal subcategory pursuant to section 7412(d)(2). In particular, EPA considered the fact that a particular technology, activated carbon injection, is available, and was not being used to its fullest extent during ICR testing. 76 Fed. Reg. at 25,046/3. Essentially, sources that were using activated carbon injection controls during ICR testing were attempting to meet state law mercury emission limits then in place; they were not attempting to maximize mercury reductions. *Id.* EPA determined that greater reductions would be achievable if the technology

were to be used to its fullest extent. Beyond-the-Floor Memo at 1-5 (EPA-HQ-OAR-2009-0234-20130) (JA XX-XX).⁴²

Contrary to Petitioners' contentions (*see* Supp. Ind. Br. 11), the record reflects that increased mercury removal rates can be expected with increased carbon injection, and that the mercury reduction rates needed for low rank virgin coal EGUs to achieve the beyond-the-floor levels are well within the proven level of mercury controls for such sources. Beyond-the-Floor Memo at 1-2 (JA XX-XX). Emission reductions of 90 percent can be achieved on existing low rank virgin coal units, and such units would only need to make emission reductions of 4 to 56 percent to reach the beyond the floor levels. *Id.*

EPA did not base the mercury beyond-the-floor standard on a single datapoint as Petitioners suggest. Supp. Ind. Br. 10. Instead, EPA based the standard at a level that sources within the subcategory had achieved in spite of the fact that the relevant control technology was underutilized. Indeed, three of the

⁴² The effectiveness of activated carbon injection to control mercury is highly dependent on the types and amount of sorbent injected. 76 Fed. Reg. at 25,014/2. Sources are unlikely to undertake unnecessary expense by injecting more sorbent (the largest cost related to activated carbon injection) than necessary to meet emission standards. As more stringent standards are set, however, sources with activated carbon injection installed can generally increase mercury capture by increasing their rate of sorbent injection.

four low rank virgin coal units tested that had mercury-specific controls were meeting the beyond-the-floor limit established. 77 Fed. Reg. at 9393/2.

Contrary to Petitioners' claims, Supp. Ind. Br. at 11, EPA found the costs for the beyond-the-floor control to be reasonable after specifically considering, *inter alia*, the incremental cost of achieving the beyond-the-floor standards, including the costs to incorporate control technology, and associated costs to operate and maintain that technology. See Memorandum from Johnson to Maxwell (Mar. 14, 2011) at 4-5 (EPA-HQ-OAR-2009-0234-2924) (JA XX-XX); 77 Fed. Reg. 9393/2-3; Beyond-the-Floor Memo at 1-4 (JA XX-XX); Emission Reduction Costs Memo (EPA-HQ-OAR-2009-0234-2925) (JA XX-XX).

B. EPA's Particulate Matter Standards for Petroleum-Coke Units Incorporated All Relevant Data and Are a Logical Outgrowth of the Proposed Rule.

Petitioners argue that EPA, in setting particulate emission standards, ignored 32 of 47 data sets in the record that show high emissions levels from petroleum-coke units.⁴³ Supp. Ind. Br. 13. This argument was not raised during the

⁴³ Petitioners cite to EPA's ICR to support this assertion, Pet Br. at 13, n.8, but fail to identify which datasets EPA "ignored." The final particulate standard for petroleum-coke units may appear to be more stringent than the proposed standard; however, it is not. The final standard is based only on filterable particulate matter, while the proposed standard was based on total particulate matter (which includes filterable and condensable particulate matter). See 77 Fed. Reg. at 9493, Table 2.

administrative process, and it has been waived. *See Dep't of Transp. v. Public Citizen*, 541 U.S. 752, 764-65 (2004). In any event, EPA established an appropriate particulate matter emission standard for petroleum-coke units and did not subject such units to disparate treatment; rather, EPA applied the same methodology in establishing all standards and its approach was reasonable. MACT Floor Memo at 3-13 (JA XX-XX).

In addition to their substantive argument, Petitioners raise a procedural argument – claiming that EPA’s final particulate matter standards were not a logical outgrowth of EPA’s proposed standards. Petitioners claim that EPA switched from an output-based to an input-based petroleum-coke standard.⁴⁴ Supp. Ind. Br. 13-14. Petitioners are incorrect. While EPA proposed an output-based particulate matter emission limit of 2.0 lb/MWh, 76 Fed. Reg. at 25,128, EPA also proposed an input-based particulate matter emission limit of 0.20 lb/MMBtu. 76 Fed. Reg. 25,128 at § 5 of Table 2. “[A]n agency may issue rules that do not exactly coincide with the proposed rule as long as the final rule is the ‘logical outgrowth’ of the proposed rule.” *Fertilizer Inst. v. EPA*, 935 F.2d 1303, 1311

⁴⁴ An “output-based” standard relies on electrical production data, and measures emissions in relation to the amount of energy produced generating those emissions. 77 Fed. Reg. at 9502/2. An “input-based” standard, by contrast, defines limits on the amount of emissions that can be produced per unit of heat input. *Id.*

(D.C. Cir. 1991). “Under the ‘logical outgrowth’ test . . . , the key question is whether commenters ‘should have anticipated’ that EPA might” issue the final rule it did. *City of Portland v. EPA*, 507 F.3d 706, 715 (D.C. Cir. 2007) (citations omitted). In this case, Petitioners were clearly on notice the EPA was considering an input-based standard.

Petitioners also challenge the definitions of the subcategories included in the Rule. Supp. Ind. Br. 14. In response to comments, EPA revised these definitions to avoid an unworkable regulatory scheme under which a unit could be in two different subcategories with conflicting requirements. EPA proposed to define a “solid oil-derived fuel-fired” unit as an EGU that “burns any solid oil-derived fuel (e.g. petroleum-coke)” 76 Fed. Reg. at 25,027/2-3. If an EGU burns more than 10 percent coal, however, that EGU would also be considered a coal-fired unit. 77 Fed. Reg. at 9376-77. Thus, the definition of “solid oil-derived fuel-fired” unit created the possibility that an EGU burning petroleum-coke to account for 80 percent of the heat input, and burning coal accounting for 20 percent of its heat input, would be faced with dual, and inconsistent, standards. *Id.* at 9377/1. In response to these comments, EPA amended its approach. As a functional matter, a new round of comment on this point would be unlikely to persuade the agency to modify its rule. *See Am. Water Works Ass’n v. EPA*, 40 F.3d 1266, 1274 (D.C. Cir.

1994) (“In most cases, if the agency then alters its course in response to the comments it receives, little purpose would be served by a second round of comment.”) The regulated public was clearly on notice regarding the proposed definitions of the various units affected by the proposed rule, and changes to those definitions to eliminate inconsistency are logical outgrowths of the proposal.

C. EPA’s Non-Continental Unit Standards Are Reasonable.

EPA additionally established appropriate emission standards for liquid oil-fired, non-continental (“Non-continental”) units. *See* Supp. Ind. Br. at 15-16. Non-continental units consist of liquid-oil fired units that are not located in the continental United States, and thus have limited access to alternate fuel sources. 77 Fed. Reg. at 9379/3. At proposal EPA lacked sufficient information to subcategorize Non-continental units, and solicited comments regarding their subcategorization. *See* 76 Fed. Reg. at 25,027/3, 25,037/2, 25,047/3; 77 Fed. Reg. at 9379/3. Thus, all parties were on notice that subcategorization of these units was possible. *See, e.g., Ass’n of Am. Railroads v. Dep’t of Transp.*, 38 F.3d 582, 589 (D.C. Cir. 1994) (holding that notice was adequate where proposal stated that the agency was “receptive to comments that . . . certain standards are unnecessary.”).

Without citation to any authority, Petitioners challenge the standards set for Non-continental units, claiming that EPA erred in deriving the limits because it incorrectly identified the number of units in the subcategory. Supp. Ind. Br. 15. Specifically, Petitioners argue that the subcategory contained less than 30 sources and, pursuant to section 7412(d)(3)(B), EPA should have set the MACT standard based on “the average emission limitation achieved by the best performing 5 sources” as opposed to the average of the top 12 percent of best performing sources. *Id.* This argument is based on information not in the record, and thus not considered by EPA. *See* 42 U.S.C. § 7607(d)(6)(C). If Petitioners wish to raise objections based on evidence outside the record, they should file a petition for reconsideration – a step they have already taken. *See* 42 U.S.C. § 7607(d)(7). Issues raised in reconsideration can be appealed only after the Agency has had an opportunity to respond. *Id.*

EPA is aware of no information in the record establishing that there are fewer than 30 units properly assigned to the Non-continental subcategory, and industry Petitioners point to no such information. Accordingly, EPA properly established the MACT floor level of control for this subcategory (with 30 or more units) based on the average emission limitation achieved by the best performing 12 percent of sources consistent with section 7412(d)(3)(B).

VIII. EPA REASONABLY DECLINED TO SET ALTERNATIVE HEALTH-BASED LIMITS FOR ACID GAS EMISSIONS.

Petitioners argue that EPA arbitrarily failed to base standards for acid gases on federal or state-defined health thresholds under section 7412(d)(4). Joint Br. 61-63. However, that section provides that considering such health thresholds is entirely discretionary. *See* 42 U.S.C. § 7412(d)(4) (EPA “may consider” health threshold levels). And if EPA chooses to consider health thresholds, it must do so “with an ample margin of safety.” *Id.*

Here, EPA considered establishing health-based limits under section 7412(d), but proposed not to adopt such limits for reasons including: “information gaps regarding facility-specific emissions of acid gases, co-located sources of acid gases and their cumulative impacts, potential environmental impacts of acid gases, and the significant co-benefits estimated from the adoption of the conventional MACT standard.” 77 Fed. Reg. at 9404/4. Many commenters supported EPA’s decision, asserting that there was insufficient information on which to establish risk-based standards with an ample margin of safety; that such standards would not account for the interaction of different acid gases, or of acid gases and other pollutants; that acid gases have serious short-term respiratory effects; and that

MACT standards would result in significant reductions in emissions of other pollutants. *Id.* at 9405; RTC Vol. 1 at 9-10 (JA XX-XX).

Considering these comments, EPA reasonably decided not to adopt risk-based emission standards. Petitioners argue that EPA supported this decision by merely “recit[ing] general, unquantified concerns” about health and environmental effects and PM co-benefits. Joint Br. 62. But while EPA stated that it “continue[d] to believe” that the health and environmental effects, as well as the co-benefits for PM and other pollutants, identified in the proposed rule supported its decision, it also explained that the data available “are not sufficient to support the development of” section 7412(d)(4) standards, particularly “given that the Act requires the EPA’s consideration of health thresholds . . . to protect public health with an ample margin of safety.” 77 Fed. Reg. at 9405. Insofar as Petitioners complain that EPA’s concerns were “unquantified,” the fault lies not with EPA. EPA invited the submission of additional data to rebut its own conclusions regarding the potential cumulative impacts of acid gases, but none was provided. *Id.* Thus, EPA did not have a sufficient basis on which to identify alternative standards that would protect public health with an ample margin of safety. Petitioners’ implicit suggestion that EPA *must* set health threshold-based standards

unless it has data proving such standards insufficient would turn the discretionary authority provided by section 7412(d)(2) on its head.

Finally, Petitioners argue that EPA “relied on factors which Congress has not intended it to consider” – environmental effects and co-benefits – when declining to set health threshold-based standards for acid gases. Joint Br. 52. But section 7412(d)(2) does not limit the factors EPA may take into account if it exercises its discretion to consider health limits, except to require “an ample margin of safety.” 77 Fed. Reg. at 9405/3. As EPA noted, there is “no legal principle that precludes” it from considering collateral benefits and other factors when exercising its discretion under section 7412(d)(2). *Id.* at 9406/2.⁴⁵

IX. EPA REASONABLY DECLINED TO CREATE SUBCATEGORIES FOR CFB UNITS

Petitioners representing certain industries argue that EPA arbitrarily refused to subcategorize circulating fluidized bed (“CFB”) units. They assert that EPA *must* create a CFB subcategory because of fundamental differences between CFB and conventional coal units; that some CFBs will not be able to attain the hydrogen chloride limit without costly add-on controls; and that separate standards must be

⁴⁵ Petitioners also argue that the startup and shutdown work practice standards were promulgated with inadequate notice. Joint Br. 63. EPA is reconsidering those standards, thus this issue is not ripe. *See* Motion to Sever and Hold Severed Issues in Abeyance, filed Jan. 6, 2013 (Doc. # 1413645).

set for coal refuse-fired CFBs.⁴⁶ Supp. Ind. Br. 3-8. However, EPA reasonably concluded that subcategorization was not appropriate here because CFB units have similar emissions to other coal-fired units.

A. EPA Has Significant Discretion in Determining Whether Subcategories Are Appropriate.

Section 7412(d)(1) provides that, when “establishing emissions standards for each category or subcategory of . . . sources of [hazardous pollutants],” the Administrator “*may* distinguish among classes, types, and sizes of sources within a category or subcategory . . .”. (emphasis added). Thus, the decision to establish a subcategory lies well within EPA’s discretion. *NRDC v. EPA*, 489 F.3d at 1375 (“Because Congress has vested EPA with subcategorization authority . . . and its exercise of that authority involves an expert determination, [petitioner] carries a heavy burden to overcome deference to the agency’s articulated rational connection between the facts found and the choices made”).

Generally, EPA exercises its discretion to subcategorize only where there is a demonstrated difference in emissions as a result of a difference in unit class, type or size, because: “if sources can achieve the same level of emissions reductions notwithstanding a difference in class, type, or size, the purposes of CAA section

⁴⁶ While Petitioners avoid saying so, they are essentially seeking the creation of *two* subcategories; one for coal refuse-fired CFB units and one for other CFB units.

[7412] are better served by requiring a similar level of control for all such units in the category or subcategory.” 77 Fed. Reg. at 9378/1; *see also id.* at 9397/2 (comparative emissions are the “key metric”). Accordingly, the only subcategory established for coal-fired units was for mercury emissions from low-rank virgin coal units. 77 Fed. Reg. at 9378-79. Many other coal-fired EGUs requested that additional subcategories be established. *See* 76 Fed. Reg. at 25,037/2; 77 Fed. Reg. at 9394. However, EPA concluded that further subcategorization was inappropriate because emissions from other coal-fired units were not “sufficiently different,” given that coal-fired EGUs of different types were among the top performers for each category of regulated pollutants. 77 Fed. Reg. at 9395/2.

B. The Record Supports EPA’s Decision Not to Create CFB Subcategories.

EPA reasonably declined to create subcategories for CFB units given that CFBs were “found across the range of top performing EGUs for all of the [hazardous pollutant] categories: Acid gas, non-mercury metallic, and [mercury].” 77 Fed. Reg. at 9397/3. While EPA agreed that “there are design and operation differences between conventional [coal]-fired EGUs” and CFBs, it concluded that the behavior of “the overall system . . . with regard to emissions to the atmosphere” does not support subcategorization. *Id.* at 9397/2. The data showed that “EGUs of

all types [CFB and non-CFB] are currently meeting one or more of the final standards.” *Id.* at 9397/3. Moreover, CFB units were found among the top performers identified by EPA, as well as among the poorer performers. *Id.* Thus, the record indicates that CFB units have similar emissions profiles to other coal-fired units across the spectrum, and thus it is not necessary to establish different standards for such units.

Petitioners argue that EPA established a CFB subcategory in the “Boiler MACT” rule (Supp. Ind. Br. 4), wherein EPA regulated hazardous pollutant emissions from major source industrial and commercial boilers. But EPA concluded that a CFB subcategory was appropriate there only in regard to carbon monoxide, but *not* in regard to mercury, hydrochloric acid, or filterable particulate matter, explaining that differences in combustion systems would only have “minor effects” on emissions of the latter. *See* 76 Fed. Reg. 15,608, 15,617-18 (Mar. 21, 2011). And Petitioners fail to note that EPA also declined to establish a CFB subcategory in the “CAMR” rule, wherein EPA sought to regulate EGU mercury emissions under section 7411. *See* 70 Fed. Reg. at 28,613/2.

Petitioners next claim that the “final [hydrogen chloride] standard would not be achievable at certain CFBs” without costly add-on controls. Supp. Ind. Br. 6. However, as noted above, some CFB units were among the top performers for *each*

category of regulated pollutants, including hydrogen chloride. 77 Fed. Reg. at 9397/3.⁴⁷ And even if some existing units are not able to meet the standards without add-ons that Petitioners deem costly, that does not mean that EPA has erred. Section 7412(d)(3) standards are based on the average emission limitation achieved by the top 12 percent of existing units, which may or may not be cost-efficient for all units. Indeed, Petitioners cannot assert that even the CFB-specific standard *they* seek would be economically achievable for all CFB units.

Finally, Petitioners argue that different standards are required for coal refuse-fired CFBs because it is “virtually impossible for waste-coal plants to meet the [hydrogen chloride] limit.” Supp. Ind. Br. 6. But coal refuse-fired CFBs were among the best performing sources on which the hydrogen chloride limit was based. RTC Vol. 1 at 587 (JA XX). Moreover, eight out of the 19 coal refuse-fired CFB units for which EPA has data demonstrated the ability to meet either the

⁴⁷ Regarding Petitioners’ argument that the injection of limestone to control hydrogen chloride can increase mercury emissions (Supp. Ind. Br. 5), EPA noted that there are at least two CFBs currently meeting both the final mercury and hydrogen chloride limits, and “numerous” technologies available to address this issue. RTC Vol. 1 at 587 (JA XX). Moreover, a CFB unit can choose to meet the alternative sulfur dioxide standard rather than the hydrogen chloride standard. 77 Fed. Reg. at 9368. Record data indicate that 25 CFB EGUs are currently able to meet either the hydrogen chloride or alternate sulfur dioxide limit. EPA-HQ-OAR-2009-0234-20132 (JA XX-XX).

hydrogen chloride standard or the alternative sulfur dioxide standard. *See* MACT Floor Memo and spreadsheets (EPA-HQ-OAR-2009-0234-20132) (JA XX-XX).

Petitioners’ real complaint appears to be that, insofar as some CFBs do not currently meet the hydrogen chloride limit, the control method identified in the rule (dry sorbent injection) would prevent those units from applying their waste ash to abandoned mines. Supp. Ind. Br. 7-8. To begin with, section 7412(d) does not require EPA to set a standard that allows for such re-use of ash; it requires EPA to set a standard based on the average level of emissions control achieved by the best performing sources, which, as noted above, included coal refuse-fired CFBs. But in any event, this issue can be avoided by the use of non-sodium based sorbents, such as hydrated lime. 77 Fed. Reg. at 9412/2. And even assuming that coal refuse-fired CFB units had to use sodium-based sorbent injection, EPA explained that this technology can be used in a way that “allows fly ash . . . to remain uncontaminated” and thus “available for . . . beneficial use.” 77 Fed. Reg. at 9413/1. Furthermore, EPA identified a number of coal refuse-fired CFBs that use add-on “polishing” controls to address hydrogen chloride emissions instead of dry sorbent injection. RTC Vol. 1 at 587 (JA XX). Therefore, the record does not indicate either that it is “virtually impossible” for coal-refuse fired CFBs to meet the hydrogen chloride standard (or the alternative sulfur dioxide standard), or that

such CFBs would be forced to use technology that eliminates their ability to dispose of their waste ash at abandoned mines in order to do so.

X. EPA WAS NOT REQUIRED TO MANDATE FUEL SWITCHING TO NATURAL GAS .

A. Julander Lacks Prudential Standing.

Petitioner Julander Energy Company, a natural gas utility, seeks regulations that will cripple its competition and increase the market for natural gas. *See* Julander Br. § 1-2. This competitive interest in “increasing the regulatory burden” on other manufacturers in order to support its own business interests is inconsistent with the CAA’s environmental purposes. *See Cement Kiln Recycling Coal. v. EPA*, 255 F.3d 855, 871 (D.C. Cir. 2001). Consequently, Julander lacks prudential standing.

To establish prudential standing, a petitioner must show that it is seeking to protect interests “within the zone of interests to be protected” by the challenged regulation. *Ass’n of Data Processing v. Camp*, 397 U.S. 150, 153 (1970). Julander is “an oil and natural gas development, exploration and production company,” and argues it has standing based on its business interests, and the fact that EPA did not require coal-fired plants to switch to natural gas.⁴⁸ Julander Br. 3. Julander’s

⁴⁸ The natural gas industry is not subject to the rule. *See* 77 Fed. Reg. at 9309/2.

pecuniary interests cannot form the basis for prudential standing, and its attempt to use a fuel-switching beyond-the-floor standard to regulate coal-fired EGUs out of existence must fail. *See Hazardous Waste Treatment Council v. EPA*, 861 F.2d 277, 283 (D.C. Cir. 1988) (“[J]udicial intervention may defeat statutory goals if it proceeds at the behest of interests that coincide only accidentally with those goals.”); *Grocery Mfrs. Ass’n v. EPA*, 693 F.3d 169, 179 (D.C. Cir. 2012) (holding that a commercial entity advancing its competitive interests it lacks standing).

B. EPA Properly Declined to Require Fuel Switching as a Beyond-the-Floor Standard.

When setting beyond-the-floor standards, EPA must first determine that such standards are “achievable for new or existing sources,” and must also consider cost and “non-air quality health and environmental impacts and energy requirements.” 42 U.S.C. § 7412(d)(2). EPA reasonably considered these requirements and declined to require fuel switching. *See* 76 Fed. Reg. at 25,046/2-3.

Julander’s challenge to new source beyond-the-floor standards is unripe because EPA is reconsidering certain new source standards for coal-fired facilities. 77 Fed. Reg. 71,321, 71,327/2 (Nov. 30, 2012) (requesting comment “on all aspects of [EPA’s] beyond-the-floor analysis”). Even if ripe, EPA reasonably

declined to mandate fuel switching because that approach would prohibit new construction of coal-fired plants. 76 Fed. Reg. at 25,049/1. For existing units, EPA reasonably rejected a fuel switching standard as not being “achievable” because natural gas supplies might be inadequate during peak demand. *Id.* at 25,046/2-3. EPA also reasonably concluded for existing sources that fuel switching would not be a cost-effective way to achieve hazardous pollutant reductions. *Id.*

Julander also claims EPA failed to address particular comments. Julander Br. § I.B. EPA is not required, however, “to discuss every item of fact or opinion included in the submissions” it receives. *Pub. Citizen, Inc. v. Fed. Aviation Admin.*, 988 F.2d 186, 197 (D.C. Cir. 1993). Here, EPA’s rationale was adequately explained. 76 Fed. Reg. at 25,046/2-/3, 25,048/3–49/1.

Julander further claims that EPA’s position is inconsistent because, under a different statutory provision, EPA proposed an emission standard that would render coal-fired EGUs cost prohibitive. Julander Br. § I.A. Julander relies on a misstatement of the *proposed* New Source Performance Standard (“NSPS”) for greenhouse gas emissions from new EGUs issued pursuant to section 7411. There, EPA proposed that new coal-fired EGUs meet the same standard as natural gas plants for greenhouse gas emissions only, because such EGUs could install a

control technology – carbon capture and storage – that “is technically feasible and sufficiently available” and can reduce emissions to levels emitted by natural gas EGUs. 77 Fed. Reg. 22,392, 22,414 (Apr. 13, 2012). EPA went on to provide an alternative compliance method – allowing new coal-fired EGUs to meet the proposed standard on an average basis over a 30-year period – which was intended to provide compliance flexibility to assure that such EGUs could continue to be built. *Id.* at 22,406-07.

EPA did not require new coal-fired EGUs to meet the same standards as natural gas plants “for any pollutants other than [greenhouse gases].” *Id.* at 22,411. Accordingly, EPA’s actions in the NSPS context retain a viable path for construction of new coal-fired EGUs.

XI. EPA REASONABLY REJECTED PUBLIC POWER’S DEMAND FOR A BLANKET COMPLIANCE EXTENSION.

Existing sources have three years from the rule’s effective date (until April 16, 2015) to come into compliance. 77 Fed. Reg. at 9304, 9407. Petitioners argue that EPA ignored comments indicating that publicly-owned EGUs could not meet that deadline. Supp. Ind. Br. 16-17. They also argue that EPA unreasonably rejected such entities’ demand for a blanket one-year extension. *Id.* at 17-18.

However, EPA addressed the concerns raised and reasonably concluded that a blanket extension was not the appropriate way to address those concerns.

A. EPA Addressed Public Power’s Compliance Concerns.

EPA recognized and responded to the compliance concerns raised by publicly-owned units, as well as their request for a permit-based compliance alternative. In the rule preamble, EPA noted that “[a] number of commenters expressed concern that the time frame for compliance . . . was too short,” and “offered suggestions on methods for allowing more time,” including “adoption of MACT compliance schedules through . . . modifications of a source’s Title V federal operating permit.” 77 Fed. Reg. at 9406-07. In response to those comments, EPA explained that section 7412(i)(3) allows permitting authorities to grant “up to a 1-year extension, on a case-by-case basis, if such additional time is necessary for the installation of controls” and suggested that this extension be used to address “site-specific challenges that may arise related to . . . construction, permitting, or labor, procurement, or resource challenges.” Id. at 9407/2, 9410/1. Moreover, EPA addressed the survey cited by Petitioners (Supp. Ind. Br. 77), responding that, while some public units “may have challenges privately owned facilities do not have,” “the availability of a fourth year . . . will ease the burden these facilities face.” RTC Vol. 2 at 342-43 (JA XX-XX). Thus, EPA plainly

considered and responded to comments from publicly-owned units raising compliance concerns.

B. EPA Reasonably Rejected the Demand for a Blanket Extension.

EPA’s conclusion that a case-by-case extension of the three-year compliance deadline, rather than a blanket extension, is the appropriate means of addressing the concerns raised by public power is consistent with the Act and reasonable.

Section 7412(i)(3)(A) states that EPA “shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the effective date of” a section 7412 standard. In *NRDC v. EPA*, 489 F.3d at 1373-74, this Court reminded EPA that, “under the plain language of the statute,” the maximum permissible compliance period was three years. However, the Court also reminded EPA that permitting authorities may issue one-year “source-by-source extensions” under section 7412(i)(3)(B). *Id.*⁴⁹

Here, EPA provided the maximum permissible compliance period – 3 years. 77 Fed. Reg. at 9407/2. However, EPA responded to compliance concerns by strongly encouraging permitting authorities to grant one-year extensions under

⁴⁹ Petitioners argue that EPA over-reads *NRDC*, 489 F.3d at 1373-74 (D.C. Cir. 2007) as barring the blanket extension they seek. Supp. Ind. Br. 18. EPA, however, only cited that case for the unremarkable proposition that the Act limits the baseline compliance period to three years. See RTC Vol. 2 at 313 (JA XX).

section 7412(i)(3)(B). *See, e.g., id.* at 9410/1 (the “fourth year should be broadly available”). EPA even outlined a path for “reliability critical units” to obtain a fifth year to come into compliance if needed. *See* 77 Fed. Reg. at 9411/2; Memo. from C. Giles at 2 (Dec. 16, 2011) (administrative orders may be issued to sources “that must operate in noncompliance with the [standards] for up to a year to address a specific and documented reliability concern”) (JA XX).⁵⁰

Petitioners argue that EPA should have gone even further and issued a blanket one-year extension to all publicly-owned utilities.⁵¹ But under section 7412(i)(3)(B), a one-year extension may only be granted “if such additional period is necessary for the installation of controls.” Petitioners have not, and cannot, demonstrate that such an extension is necessary for *every* publicly-owned EGU. In contrast, EPA observed that “many plants that are owned by public power

⁵⁰ At <http://www.epa.gov/compliance/resources/policies/civil/erp/mats-erp.pdf>.

⁵¹ Petitioners argue that EPA previously indicated that “a category-wide adjudication” of an extension request is appropriate “when the facts are already known.” Supp. Ind. Br. 18 (quoting 76 Fed. Reg. 29,032, 29,064 (May 10, 2011) (setting standards for the secondary lead smelting industry)). But in that rulemaking, EPA interpreted regulations implementing section 7412(f)(4), which allows the Administrator to grant a two-year waiver in regard to standards that otherwise apply immediately if certain conditions are met. 76 Fed. Reg. at 29,064. Section 7412(i)(3)(B), in contrast, allows permitting authorities to grant a one-year extension to an existing source in “a permit.” In any event, EPA reasonably concluded here that the facts do not support a category-wide determination.

authorities are well controlled” and “well positioned to implement this rulemaking.” RTC Vol. 2 at 343 (JA XX). Moreover, the data available to EPA indicated that “most units will be able to fully comply within 3 years,” 77 Fed. Reg. at 9410, and that there are “approximately 69 EGUs that appear to be currently complying with all of the existing source standards,” RTC Vol. 2 at 313 (JA XX). That number included municipal-owned utilities. *See* EPA-HQ-OAR-2009-0234-20132 (JA XX-XX). In such circumstances, declining to issue a blanket extension was reasonable.

XII. THE “AVERAGING ALTERNATIVE” IS LAWFUL.

Contrary to Environmental Petitioners’ argument (Env. Br. 15-22), EPA properly allowed contiguous, commonly-controlled units within a source to average their emissions to demonstrate compliance with the standards.

The rule defines an “existing affected source” subject to the rule as “the collection of coal- or oil-fired EGUs . . . within a single contiguous area and under common control.” 77 Fed. Reg. at 9366/3. The rule accordingly allows “emissions averaging” among contiguous, commonly-controlled EGUs for purposes of demonstrating compliance with the MACT standard when those EGUs are in the same subcategory and demonstrate compliance using continuous emissions monitoring systems (“CEMS”), sorbent traps, or quarterly stack testing.

Id. at 9473. The rule further provides that, except for mercury emissions from certain coal-fired units that have an additional alternative averaging period,⁵² “the averaging time for emissions averaging for pollutants is 30 [operating] days.” *Id.* Units averaging their emissions must do so over the same 30-day period (i.e., units cannot average emissions from different 30-day intervals). *Id.*

Petitioners’ quarrel with multi-unit averaging is perhaps more properly viewed as a quarrel with the Rule’s definition of an existing affected source as a “collection of coal- or oil-fired EGUs . . . within a single contiguous area and under common control.” 77 Fed. Reg. at 9366/3. But Petitioners do not challenge that definition. Moreover, the multi-unit emissions averaging provisions are consistent with EPA’s “general policy” and longstanding practice⁵³ of “encouraging the use of flexible compliance approaches” that “include emissions averaging.” 77 Fed. Reg. at 9385/1. EPA explained that “emissions averaging can provide sources the flexibility to comply in the least costly manner while still maintaining a regulation that is workable and enforceable.” *Id.* EPA imposed,

⁵² As noted by Petitioners, the alternative averaging period for monitoring mercury emissions from certain EGUs is 90 days. 77 Fed. Reg. at 9385.

⁵³ See, e.g., 62 Fed. Reg. 52,384, 52,387 (Oct. 7, 1997) (allowing emissions averaging when setting standards for hazardous pollutants emitted by aluminum reduction plants).

however, a number of limits on emissions averaging, including: a requirement that units be in the same subcategory; a requirement that sources subject to the NSPS for particulate matter meet that standard; a bar on averaging different pollutants; and a bar on averaging for new sources. *Id.* EPA further required that facilities intending to average emissions develop an “emissions averaging plan” that identifies, *inter alia*, the units being averaged; the control technology installed and the associated operating parameters; and the test plan for each unit. *Id.* at 9385-86.

Environmental Petitioners claim that, by allowing such averaging, EPA has impermissibly relaxed the standards. Env. Br. 15-22. They argue that, while the standards are based on a 30-boiler operating day averaging period, the averaging alternative allows multi-unit facilities to calculate their emissions rates based on a longer period; *i.e.*, if two units within a facility average their rates (each measured over 30 boiler operating days), they are effectively averaging those rates over 60 boiler operating days. *Id.* at 8, 16. Petitioners argue that such averaging allows emissions “spikes” and is inconsistent with the minimum stringency requirements of section 7412(d)(3). *See* Env. Br. 4-5, 15-17. These arguments fail.

To begin with, insofar as Environmental Petitioners argue that the averaging alternative masks “spikes,” thereby allowing units to meet the standards only “some of the time” (Env. Br. 9), this is not the case. The standards are based on a

30-boiler operating day rolling averaging period, and units averaging their emissions must utilize the same 30-day period when doing so. If a unit experiences a “spike” in emissions on day 25, that spike will result in a violation of the standard unless emissions on other days, both before and afterward (given that average emissions are calculated on a rolling basis), are sufficiently low to offset it. Thus, the potential for so-called “spikes” is inherent in all rate-based standards, as the emissions rate is necessarily calculated over some period of time. However, “spikes” can occur without resulting in a violation only if emissions are sufficiently below the standard at other times during the averaging period.

More importantly, the averaging alternative is consistent with section 7412(d)(3) of the Act, which requires EPA to set floor standards for existing sources that are “not [] less stringent” than “the average emission limitation achieved by the best performing twelve percent” of such sources. EPA has established existing source floor standards based on this directive, and there is nothing about allowing multiple units to average their emissions when demonstrating compliance that is inconsistent with this “minimum stringency” requirement, so long as the levels a source can emit under the averaging provisions are no greater than the emissions levels that would be permitted should each unit within that source be required to demonstrate compliance individually. Indeed,

EPA acknowledged that it “must ensure that any emissions averaging option . . . will be no less stringent than unit-by-unit implementation of the MACT floor limits.” 77 Fed. Reg. at 9385/1-2. EPA further explained:

Averaging across affected units is permitted only if it can be demonstrated that the total quantity of any particular HAP that may be emitted . . . will not be greater under the averaging mechanism than it could be if each individual affected EGU in the subcategory complied separately with the applicable standard. Under this test, the practical outcome of averaging is equivalent to compliance with the MACT floor limits by each discrete EGU

Id at 9385/3. Environmental Petitioners argue that it is “irrelevant” that total emissions from the affected source can be no greater as a result of the averaging alternative than if each of those units were required to demonstrate compliance separately. Env. Br. 18. It is plainly not. If each source subject to a hazardous pollutant standard must demonstrate emissions that are equivalent to or less than the total emissions permitted under that standard, then there can be no inconsistency with section 7412(d)(3)’s minimum stringency requirements so long as the standard itself is consistent with those requirements.

Petitioners attempt to create an inconsistency where there is none by focusing on the form of the standards at issue; *i.e.*, by arguing that, because the standards are rate-based, allowing multiple units to average their emissions relaxes the standard by implicitly extending the time period over which they are

calculated. But again, given that Petitioners concede that the averaging alternative will not result in an increase of emissions from a source beyond the level permitted under the applicable standard (*see* Env. Br. 18), multi-unit averaging cannot be viewed as “relaxing” the standards below the rate-based limits. Such averaging could, theoretically, allow *an individual unit* within a source to emit at higher levels than if that unit was required to comply individually. However, this would be permitted only if the source offsets those emissions by reducing emissions at another of its units.⁵⁴ Therefore, the result is not that the rate-based standard set forth in the rule is exceeded; rather, it is simply that the source’s total emissions might not be reduced *below* the standard to the same extent as if each unit had to demonstrate compliance individually.⁵⁵ But while Petitioners no doubt consider

⁵⁴ For example, if a source consisted of three units, A, B and C, and the emission limit were Y (measured over a 30-day period), unit A could theoretically emit more than Y for some part, or all, of a 30-day period. However, since A is merely one component of the source, the source as a whole would still meet the standard so long as B and C emit sufficiently less than the standard over the same period.

⁵⁵ As a factual matter, it is far from clear that eliminating the averaging alternative would result in greater emission reductions. One commenter argued that averaging “provide[s] a positive incentive to encourage companies to upgrade or install controls that would achieve reductions beyond compliance requirements” by allowing sources to “invest[] resources where the greatest reductions can be made.” RTC Vol. 2 at 361 (JA XX). And Petitioners’ brief provides no evidence that sources would reduce emissions beyond what is required by the rule in the absence of emissions averaging.

further emission reductions desirable, and may prefer as a policy matter that each unit's emissions be measured individually against the standard (rather than measuring *the source's* emissions), such a result is not mandated by section 7412(d)(3). And, as noted above, Petitioners have not challenged EPA's definition of a "source" subject to the rule to include multiple contiguous units under common control.

For similar reasons, the limited multi-unit averaging permitted under the rule is also not inconsistent with "beyond-the-floor" requirements in section 7412(d)(2). Petitioners do not actually challenge EPA's decision, based on the factors identified in section 7412(d)(2), that beyond-the-floor standards were only warranted for mercury emissions from one subcategory of existing sources (low rank virgin coal EGUs), *see* 77 Fed. Reg. at 9393-94, and there is nothing inconsistent between that conclusion and allowing multiple units within a source to demonstrate compliance through averaging.

Rather, Environmental Petitioners' main complaint appears to be that, in *other* rulemakings where EPA allowed averaging, it applied a "discount factor" to reduce emission rates for sources availing themselves of an averaging alternative. *See* Env. Br. 9, 19. Petitioners point in particular to the Hazardous Organic NESHAP, or "HON" rule. Env. Br. 9-10. But as EPA explained in responding to

comments,⁵⁶ whereas the HON rule “covers a broad number of unit types, products, and processes,” EGUs subject to the instant rule “differ generally only in the fuel used to produce electricity,” and this difference is “accounted for in this rule by prohibiting units from differing subcategories – which are fuel based – from participating in emissions averaging.” RTC Vol. 2 at 361-62 (JA XX-XX).

Finally, Environmental Petitioners also argue that EPA improperly relied on its Upper Prediction Limit (“UPL”) calculation as mitigating the “relaxation” of standards that they claim impermissibly results from averaging. Env. Br. 20. But EPA did not rely on the UPL analyses in this regard. It was industry commenters who argued that, having already accounted for variability at individual units through the UPL analysis, it was inappropriate for EPA to then allow a multiple-unit facility to further “reduce variability by averaging” without applying a discount factor. *See* RTC Vol. 2 at 362 [JA XX]. In responding, the agency simply noted that the UPL analysis was not relevant to the question of whether a discount factor was appropriate, given that the operational variability accounted for by the UPL analysis implicates separate considerations. *Id.* Thus, contrary to

⁵⁶ The majority of comments on this issue opposed the use of a discount factor, arguing that it would render averaging a non-viable option, and “make[] an impossible compliance situation even worse.” RTC Vol. 2 at 360-61 (JA XX-XX).

Petitioners’ assertion, EPA did not rely on the UPL calculation to support the averaging provision.

For all these reasons, EPA’s limited allowance of emissions averaging is both consistent with the requirements of the Act and reasonable.

XIII. EPA’S MONITORING OPTIONS FOR NON-MERCURY METALS PROVIDE SUFFICIENTLY RELIABLE AND TIMELY INFORMATION FOR DETERMINING COMPLIANCE.

The Act explicitly gives EPA the authority to designate alternative methods for ensuring compliance with standards, so long as those alternatives “provide sufficiently reliable and timely information for determining compliance.” 42 U.S.C. § 7661c(b). Accordingly, “EPA has broad discretion in selecting a monitoring regime that ensures compliance,” and there is “no presumption in favor of any particular type of monitoring.” *Sierra Club v. EPA*, 353 F.3d 976, 992 (D.C. Cir. 2004).

A. Compliance Alternatives for Non-Mercury Metals.

Here, EPA identified several methods by which EGUs can demonstrate compliance with standards. To demonstrate compliance with the limits for filterable particulate matter (regulated as a surrogate for non-mercury metals), EGUs may use: (1) a continuous emission monitoring system (“CEMS”); (2)

quarterly stack testing; (3) a “low-emitting” option; or (4) a “continuous parameter monitoring system,” or “CPMS.” *See* 77 Fed. Reg. at 9370-72

An EGU may use the “low-emitting” monitoring option only if it can demonstrate that its emissions are less than 50 percent of the limit in an initial performance test, and then continue to actually demonstrate that low level of emissions in a series of performance tests conducted over three years. *Id.* at 9370-72, 9384. After three years, the EGU must subsequently conduct performance tests to confirm the designation once every three years. *Id.*

A CPMS is a continuous monitoring system, but it does not monitor actual emissions. Rather, a CPMS produces a signal that may be expressed in milliamps, stack concentration, or some other output form, that enables the source to monitor a unit’s operating parameters. *Id.* at 9384/2. An operating limit is established through an initial performance test (a stack test comprised of multiple test runs), based on the highest one-hour average signal output experienced during the test, and must be re-established annually. *Id.* at 9371-72, 9481. Between performance tests, the EGU must demonstrate continuous compliance with the operating limit, calculating 30-boiler operating day rolling emissions averages using all valid hourly data. *Id.* Moreover, the CPMS must undergo quality checks, and the EGU must develop and follow a site-specific monitoring plan. *Id.* at 9372/3.

B. CPMS Provide Sufficient and Timely Compliance Information.

Environmental Petitioners first challenge the CPMS option. However, Petitioners failed to raise this challenge in comments, and have therefore waived it. 42 U.S.C. § 7607(d)(7)(B); *Sierra Club*, 353 F.3d at 991 (argument opposing parameter monitoring was “waived because it was not raised” in comments).

In any event, Petitioners’ objections to the use of CPMS fail on the merits. Indeed, this Court previously rejected a challenge to a parametric monitoring alternative with the same structure and requirements. *Sierra Club*, 353 F.3d at 991. In *Sierra Club*, EPA had allowed copper smelters to demonstrate compliance with particulate matter emission limits by “demonstrat[ing] initial compliance through performance testing;” “repeat[ing] performance tests at least annually;” “continuously monitor[ing] operating parameters,” and “show[ing] that the facility operates within those parameters” between annual tests. *Id.* Because “analysis of this issue requires a high level of technical expertise,” the Court concluded that it must “defer to the informed discretion of the Agency” in concluding that such a regime would adequately assure compliance. *Id.* (internal quotation omitted). Petitioners make no effort to distinguish this holding.

Petitioners object to the CPMS option on the ground that the operating limit with which EGUs must comply between annual performance tests could

correspond to an emissions level higher than the applicable standard. But while the operating limit could theoretically be set at a value corresponding to emissions levels above the applicable limit because it is based on the highest hourly output experienced during the performance test, this is unlikely to occur in practice. First, the operating limit is only valid if the performance test actually complies with the emission standard. *See* 77 Fed. Reg. at 9481 (requiring determination of operating limits during performance test that demonstrates compliance with the applicable limit). As EPA has noted in the past, owners and operators of sources “fine tune their operations and emissions control processes” in the time leading up to performance tests to ensure that their sources pass, with the result that few tests conducted for compliance purposes result in emissions above the applicable limits. 62 Fed. Reg. 8314, 8315 (Feb. 24, 1997).

Moreover, there are other “checks” built into the CPMS option. As noted above, a source electing to use a CPMS must implement a site-specific monitoring plan and conduct quality checks. 77 Fed. Reg. at 9372/3. It must also reassess and adjust its operating limit annually in accordance with the results of the performance test. 77 Fed. Reg. at 9466/3. And if a unit is found to have exceeded emission standards during a performance test, it is of course subject to potential enforcement action. But in the interim between annual tests, the operating limit

serves to minimize the likelihood of non-compliance by alerting the source to potentially problematic spikes in emissions and enabling quick corrective action.⁵⁷ Thus, considered as a whole, the CPMS option plainly provides sufficient, timely information regarding compliance.

Environmental Petitioners' next argument as to why the CPMS option does not provide reasonable assurance of compliance – that there is an inconsistency between standards developed based on data from stack tests lasting several hours and reliance on an operating signal set based on one hour of emissions data (Env. Br. 24) – also fails. To begin with, Petitioners' argument again focuses unduly on the operating limit, ignoring the many other components and requirements that comprise that CPMS option (*e.g.*, annual performance testing; calibration and quality testing requirements; the monitoring plan requirement).⁵⁸ Furthermore, the

⁵⁷ See 58 Fed. Reg. 54,648, 54,659 (Oct. 22, 1993) (noting, in the Compliance Assurance Monitoring rule preamble, that “self-monitoring (using instrumental systems like CPMS) could provide data that would allow an owner or operator to rectify...problems before a period of non-compliance occurs”).

⁵⁸ Petitioners suggest that EPA is inappropriately relying on the compliance assurance monitoring requirements set forth at 40 C.F.R. part 64 and Title V requirements to fill “gaps” in monitoring left by the CPMS option. Env. Br. 24. This is incorrect. EPA simply indicated that it agreed with comments that other programs that require proper operation of pollution controls would “enhance” the monitoring required by the Rule and render *additional* limits unnecessary. 77 Fed. Reg. at 9384/2; *see also* 77 Fed. Reg. at 9420/2 (EPA is “aware that other rules . . .

tests on which the standards were based and the performance tests pursuant to which the CPMS operating limits are set are fundamentally the same type of tests – stack tests. Indeed, Petitioners’ argument, if followed to its logical conclusion, would imply that not only must each compliance option use the same monitoring methodology as the tests on which the standards were based, but it must also measure emissions over the exact same time intervals. This is inconsistent with the flexibility explicitly provided to EPA by 42 U.S.C. § 7661c(b), as well as this Court’s directive in *Sierra Club* that EPA be allowed “broad discretion in selecting a monitoring regime” with “no presumption in favor of any particular type of monitoring.” 353 F.3d at 991.

Petitioners cite *Portland Cement Ass’n v. Ruckelshaus*, 486 F.2d 375 (D.C. Cir. 1973), and *Clean Air Implementation Project v. EPA*, 150 F.3d 1200 (D.C. Cir. 1998), for the proposition that there can be no conflict between the test methods used to set a standard and those used to measure compliance. In *Portland Cement*, petitioner objected to the sampling methodology used to set the challenged standard, arguing that no sampling episode was longer than 30 minutes whereas compliance was to be measured based on 2-hour intervals. 486 F.2d at

already require continuous monitoring in most cases . . . so the need to impose additional operating limits monitoring or CEMS on those units is much reduced”).

396-97. This challenge to initial sampling as insufficiently robust presents a different issue than Petitioners' argument that a compliance method may not differ at all in form from the initial testing method. In any event, *Portland Cement* predates the Court's decision in *Sierra Club* upholding a parametric monitoring option like the one challenged here, as well as section 504(b) of the Act, 42 U.S.C. § 7661c(b), which Petitioners agree sets the applicable standard for alternative compliance methods. See Pub. L. No. 101-549, Title V, § 501, 104 Stat. 2642 (Nov. 15, 1990). In *Clean Air Implementation Project*, petitioners argued that "by altering the means of determining compliance" EPA had impermissibly "increased the stringency of the underlying standards." 150 F.3d at 1203. However, the Court did not weigh in on the merits of that argument, instead holding that the case was unripe. *Id.* at 1205-06. Accordingly, even assuming Environmental Petitioners have not waived their arguments concerning CPMS by failing to raise them in comments, these cases provide no support for their position. Rather, as in *Sierra Club*, the Court should hold that the CPMS option is well within EPA's "broad discretion" to prescribe alternative compliance methods. 353 F.3d at 991.

B. The Quarterly Stack Testing and Low Emitting Options Provide Sufficient and Timely Compliance Information.

Environmental Petitioners also challenge the quarterly stack testing and low-emitting options for non-mercury metals. They argue that quarterly stack testing (testing every three months) is too infrequent to reasonably assure compliance with a standard that is set in the form of a 30-boiler operating day emissions rate, given the variability that EGUs experience. Env. Br. 25-26. To begin with, Petitioners implicit suggestion that, in order to demonstrate compliance with a standard set in the form of a 30-day emissions rate, sources must be required to test every 30 days is again at odds with the flexibility explicitly provided by section 7661c(b).

Moreover, the fact that sources begin preparing for stack tests well in advance makes it unlikely that they will fall out of compliance between quarterly tests. Based on EPA's experience and comments from industry, preparation for a stack test can take between 5 and 30 days, and the test itself takes three days or more. *See, e.g.*, EPA-HQ-OAR-2009-0234-0017 at 29-30 (JA XX-XX) (explaining 30 days needed for scheduling tests and 3 days needed for conducting tests at coal-fired EGUs). It is unlikely that sources will fall out of compliance where retests are at most 90 days – but often considerably less time – away. *See* RTC Vol. 2 at 93 (“The quarterly stack testing period . . . is expected to be frequent

enough to ensure that a unit’s emissions control devices and processes continue to operate in the same manner as during the previous stack test.”) (JA XX).

Petitioners similarly argue that the low-emitting option does not provide a reasonable assurance of compliance given the high degree of variability experienced by even the best-performing sources. Env. Br. 26. However, as described above, in order to qualify for the low-emitting option, a source must consistently demonstrate, during all required tests⁵⁹ over a *three-year period*, that its emissions are less than 50 percent of the applicable limit. 77 Fed. Reg. at 9371/1. It was reasonable for EPA to conclude that a source that meets this stringent prerequisite is unlikely to fall out of compliance. Furthermore, Petitioners ignore the emissions reductions that will result from encouraging sources to achieve “very low emissions” in exchange for reduced monitoring requirements. *See* RTC Vol. 2 at 113 (JA XX).

In objecting to all monitoring options for non-mercury metals except for continuous emissions monitoring via a CEMS, Environmental Petitioners essentially take issue with the Act’s authorization of alternative monitoring options. But as this Court explained in *Sierra Club*, so long as EPA “reasonably

⁵⁹ This not only includes quarterly testing for EGUs subject to the rule, but also the tests required under other regulations such as NSPS and state regulations.

articulate(s) the basis for its decision,” the Court will not “second guess[] EPA’s judgment that the regime it imposed would meet the statutory standard of ‘sufficiently reliable and timely information for determining compliance.’” 353 F.3d at 991-92 (citing 42 U.S.C. § 7661c(b)). EPA has reasonably articulated the basis for the monitoring alternatives challenged here.

CONCLUSION

For the foregoing reasons, the petitions for review should be denied.

Respectfully submitted,

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**RESPONDENT'S CERTIFICATE OF COMPLIANCE WITH WORD
LIMITATION AND TYPEFACE REQUIREMENTS**

Respondent United States Environmental Protection Agency hereby certifies that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains 25,958 words, as counted by Microsoft Word, excluding the signature block and the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii), and that it complies with the typeface and type style requirements of Fed. R. App. P. 32(a)(5) and 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 14-point type.

DATED: January 22, 2013

/s/ Eric Hostetler
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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Brief for Respondent Environmental Protection Agency has been served through the Court's CM/ECF system on all registered counsel this 22nd day of January 2013.

/s/ Eric Hostetler
Counsel for Respondent

STATUTORY ADDENDUM

TABLE OF CONTENTS

42 U.S.C. § 7412	ADD1
42 U.S.C. § 7604	ADD54
42 U.S.C. § 7607	ADD58
42 U.S.C. § 7661c	ADD66
Pub. L. No. 90-604, 84 Stat. 1676, 42 U.S.C. § 7412(a)(1) (1970).....	ADD68
Pub. L. No. 101-549, Title V, § 501, 104 Stat. 2642 (Nov. 15, 1990)	ADD70
H.R. Rep. No. 101-490, reprinted in 2 A Legislative History of the Clean Air Act Amendments of 1990 (Comm. Print 1993)	ADD72



Effective: August 5, 1999

United States Code Annotated [Currentness](#)

Title 42. The Public Health and Welfare

Chapter 85. Air Pollution Prevention and Control ([Refs & Annos](#))

▢ [Subchapter I. Programs and Activities](#)

▢ [Part A. Air Quality and Emissions Limitations](#) ([Refs & Annos](#))

→→ **§ 7412. Hazardous air pollutants**

(a) Definitions

For purposes of this section, except subsection (r) of this section--

(1) Major source

The term “major source” means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants. The Administrator may establish a lesser quantity, or in the case of radionuclides different criteria, for a major source than that specified in the previous sentence, on the basis of the potency of the air pollutant, persistence, potential for bioaccumulation, other characteristics of the air pollutant, or other relevant factors.

(2) Area source

The term “area source” means any stationary source of hazardous air pollutants that is not a major source. For purposes of this section, the term “area source” shall not include motor vehicles or nonroad vehicles subject to regulation under subchapter II of this chapter.

(3) Stationary source

The term “stationary source” shall have the same meaning as such term has under [section 7411\(a\)](#) of this title.

(4) New source

The term “new source” means a stationary source the construction or reconstruction of which is commenced after the Administrator first proposes regulations under this section establishing an emission standard applicable to such source.

(5) Modification

The term “modification” means any physical change in, or change in the method of operation of, a major source which increases the actual emissions of any hazardous air pollutant emitted by such source by more than a de minimis amount or which results in the emission of any hazardous air pollutant not previously emitted by more than a de minimis amount.

(6) Hazardous air pollutant

The term “hazardous air pollutant” means any air pollutant listed pursuant to subsection (b) of this section.

(7) Adverse environmental effect

The term “adverse environmental effect” means any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.

(8) Electric utility steam generating unit

The term “electric utility steam generating unit” means any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale shall be considered an electric utility steam generating unit.

(9) Owner or operator

The term “owner or operator” means any person who owns, leases, operates, controls, or supervises a stationary source.

(10) Existing source

The term “existing source” means any stationary source other than a new source.

(11) Carcinogenic effect

Unless revised, the term “carcinogenic effect” shall have the meaning provided by the Administrator under Guidelines for Carcinogenic Risk Assessment as of the date of enactment. Any revisions in the existing Guidelines shall be subject to notice and opportunity for comment.

(b) List of pollutants

(1) Initial list

The Congress establishes for purposes of this section a list of hazardous air pollutants as follows:

CAS number	Chemical name
75070	Acetaldehyde
60355	Acetamide
75058	Acetonitrile
98862	Acetophenone
53963	2-Acetylaminofluorene
107028	Acrolein

79061 Acrylamide
79107 Acrylic acid
107131 Acrylonitrile
107051 Allyl chloride
92671 4-Aminobiphenyl
62533 Aniline
90040 o-Anisidine
1332214 Asbestos
71432 Benzene (including benzene from gasoline)
92875 Benzidine
98077 Benzotrichloride
100447 Benzyl chloride
92524 Biphenyl
117817 Bis(2-ethylhexyl)phthalate (DEHP)
542881 Bis(chloromethyl)ether
75252 Bromoform
106990 1,3-Butadiene
156627 Calcium cyanamide
105602 Caprolactam
133062 Captan
63252 Carbaryl
75150 Carbon disulfide
56235 Carbon tetrachloride
463581 Carbonyl sulfide
120809 Catechol
133904 Chloramben
57749 Chlordane
7782505 Chlorine
79118 Chloroacetic acid
532274 2-Chloroacetophenone
108907 Chlorobenzene
510156 Chlorobenzilate
67663 Chloroform
107302 Chloromethyl methyl ether
126998 Chloroprene
1319773 Cresols/Cresylic acid (isomers and mixture)
95487 o-Cresol

108394 m-Cresol
106445 p-Cresol
98828 Cumene
94757 2,4-D, salts and esters
3547044 DDE
334883 Diazomethane
132649 Dibenzofurans
96128 1,2-Dibromo-3-chloropropane
84742 Dibutylphthalate
106467 1,4-Dichlorobenzene(p)
91941 3,3-Dichlorobenzidene
111444 Dichloroethyl ether (Bis(2-chloroethyl)ether)
542756 1,3-Dichloropropene
62737 Dichlorvos
111422 Diethanolamine
121697 N,N-Diethyl aniline (N,N-Dimethylaniline)
64675 Diethyl sulfate
119904 3,3-Dimethoxybenzidine
60117 Dimethyl aminoazobenzene
119937 3,3'-Dimethyl benzidine
79447 Dimethyl carbamoyl chloride
68122 Dimethyl formamide
57147 1,1-Dimethyl hydrazine
131113 Dimethyl phthalate
77781 Dimethyl sulfate
534521 4,6-Dinitro-o-cresol, and salts
51285 2,4-Dinitrophenol
121142 2,4-Dinitrotoluene
123911 1,4-Dioxane (1,4-Diethyleneoxide)
122667 1,2-Diphenylhydrazine
106898 Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106887 1,2-Epoxybutane
140885 Ethyl acrylate
100414 Ethyl benzene
51796 Ethyl carbamate (Urethane)
75003 Ethyl chloride (Chloroethane)
106934 Ethylene dibromide (Dibromoethane)

107062 Ethylene dichloride (1,2-Dichloroethane)
107211 Ethylene glycol
151564 Ethylene imine (Aziridine)
75218 Ethylene oxide
96457 Ethylene thiourea
75343 Ethylidene dichloride (1,1-Dichloroethane)
50000 Formaldehyde
76448 Heptachlor
118741 Hexachlorobenzene
87683 Hexachlorobutadiene
77474 Hexachlorocyclopentadiene
67721 Hexachloroethane
822060 Hexamethylene-1,6-diisocyanate
680319 Hexamethylphosphoramide
110543 Hexane
302012 Hydrazine
7647010 Hydrochloric acid
7664393 Hydrogen fluoride (Hydrofluoric acid)
123319 Hydroquinone
78591 Isophorone
58899 Lindane (all isomers)
108316 Maleic anhydride
67561 Methanol
72435 Methoxychlor
74839 Methyl bromide (Bromomethane)
74873 Methyl chloride (Chloromethane)
71556 Methyl chloroform (1,1,1-Trichloroethane)
78933 Methyl ethyl ketone (2-Butanone)
60344 Methyl hydrazine
74884 Methyl iodide (Iodomethane)
108101 Methyl isobutyl ketone (Hexone)
624839 Methyl isocyanate
80626 Methyl methacrylate
1634044 Methyl tert butyl ether
101144 4,4-Methylene bis(2-chloroaniline)
75092 Methylene chloride (Dichloromethane)
101688 Methylene diphenyl diisocyanate (MDI)

101779 4,4'-Methylenedianiline
91203 Naphthalene
98953 Nitrobenzene
92933 4-Nitrobiphenyl
100027 4-Nitrophenol
79469 2-Nitropropane
684935 N-Nitroso-N-methylurea
62759 N-Nitrosodimethylamine
59892 N-Nitrosomorpholine
56382 Parathion
82688 Pentachloronitrobenzene (Quintobenzene)
87865 Pentachlorophenol
108952 Phenol
106503 p-Phenylenediamine
75445 Phosgene
7803512 Phosphine
7723140 Phosphorus
85449 Phthalic anhydride
1336363 Polychlorinated biphenyls (Aroclors)
1120714 1,3-Propane sultone
57578 beta-Propiolactone
123386 Propionaldehyde
114261 Propoxur (Baygon)
78875 Propylene dichloride (1,2-Dichloropropane)
75569 Propylene oxide
75558 1,2-Propylenimine (2-Methyl aziridine)
91225 Quinoline
106514 Quinone
100425 Styrene
96093 Styrene oxide
1746016 2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345 1,1,2,2-Tetrachloroethane
127184 Tetrachloroethylene (Perchloroethylene)
7550450 Titanium tetrachloride
108883 Toluene
95807 2,4-Toluene diamine
584849 2,4-Toluene diisocyanate

95534 o-Toluidine
8001352 Toxaphene (chlorinated camphene)
120821 1,2,4-Trichlorobenzene
79005 1,1,2-Trichloroethane
79016 Trichloroethylene
95954 2,4,5-Trichlorophenol
88062 2,4,6-Trichlorophenol
121448 Triethylamine
1582098 Trifluralin
540841 2,2,4-Trimethylpentane
108054 Vinyl acetate
593602 Vinyl bromide
75014 Vinyl chloride
75354 Vinylidene chloride (1,1-Dichloroethylene)
1330207 Xylenes (isomers and mixture)
95476 o-Xylenes
108383 m-Xylenes
106423 p-Xylenes
0 Antimony Compounds
0 Arsenic Compounds (inorganic including arsine)
0 Beryllium Compounds
0 Cadmium Compounds
0 Chromium Compounds
0 Cobalt Compounds
0 Coke Oven Emissions
0 Cyanide Compounds [FN1]
0 Glycol ethers [FN2]
0 Lead Compounds
0 Manganese Compounds
0 Mercury Compounds
0 Fine mineral fibers [FN3]
0 Nickel Compounds
0 Polycyclic Organic Matter [FN4]
0 Radionuclides (including radon) [FN5]
0 Selenium Compounds

NOTE: For all listings above which contain the word “compounds” and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chem-

ical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

[FN1] $X'CN$ where $X = H'$ or any other group where a formal dissociation may occur. For example KCN or $Ca(CN)_2$

[FN2] Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R-(OCH_2CH_2)_n-OR'$ where

$n = 1, 2, \text{ or } 3$

$R = \text{alkyl or aryl groups}$

$R' = R, H, \text{ or groups which, when removed, yield glycol ethers with the structure: } R-(OCH_2CH)_n-OH.$ Polymers are excluded from the glycol category.

[FN3] Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

[FN4] Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C .

[FN5] A type of atom which spontaneously undergoes radioactive decay.

(2) Revision of the list

The Administrator shall periodically review the list established by this subsection and publish the results thereof and, where appropriate, revise such list by rule, adding pollutants which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise, but not including releases subject to regulation under subsection (r) of this section as a result of emissions to the air. No air pollutant which is listed under [section 7408\(a\)](#) of this title may be added to the list under this section, except that the prohibition of this sentence shall not apply to any pollutant which independently meets the listing criteria of this paragraph and is a precursor to a pollutant which is listed under [section 7408\(a\)](#) of this title or to any pollutant which is in a class of pollutants listed under such section. No substance, practice, process or activity regulated under subchapter VI of this chapter shall be subject to regulation under this section solely due to its adverse effects on the environment.

(3) Petitions to modify the list

(A) Beginning at any time after 6 months after November 15, 1990, any person may petition the Administrator to modify the list of hazardous air pollutants under this subsection by adding or deleting a substance or, in case of listed pollutants without CAS numbers (other than coke oven emissions, mineral fibers, or polycyclic organic matter) removing certain unique substances. Within 18 months after receipt of a petition, the Administrator shall either grant or deny the petition by publishing a written explanation of the reasons for the Administrator's decision. Any such petition shall include a showing by the petitioner that there is adequate data on the health or environmental defects [FN1] of the pollutant or other evidence adequate to support the petition. The Administrator may not deny a petition solely on the basis of inadequate resources or time for review.

(B) The Administrator shall add a substance to the list upon a showing by the petitioner or on the Administrator's own determination that the substance is an air pollutant and that emissions, ambient concentrations, bioaccumulation or deposition of the substance are known to cause or may reasonably be anticipated to cause adverse effects to human health

or adverse environmental effects.

(C) The Administrator shall delete a substance from the list upon a showing by the petitioner or on the Administrator's own determination that there is adequate data on the health and environmental effects of the substance to determine that emissions, ambient concentrations, bioaccumulation or deposition of the substance may not reasonably be anticipated to cause any adverse effects to the human health or adverse environmental effects.

(D) The Administrator shall delete one or more unique chemical substances that contain a listed hazardous air pollutant not having a CAS number (other than coke oven emissions, mineral fibers, or polycyclic organic matter) upon a showing by the petitioner or on the Administrator's own determination that such unique chemical substances that contain the named chemical of such listed hazardous air pollutant meet the deletion requirements of subparagraph (C). The Administrator must grant or deny a deletion petition prior to promulgating any emission standards pursuant to subsection (d) of this section applicable to any source category or subcategory of a listed hazardous air pollutant without a CAS number listed under subsection (b) of this section for which a deletion petition has been filed within 12 months of November 15, 1990.

(4) Further information

If the Administrator determines that information on the health or environmental effects of a substance is not sufficient to make a determination required by this subsection, the Administrator may use any authority available to the Administrator to acquire such information.

(5) Test methods

The Administrator may establish, by rule, test measures and other analytic procedures for monitoring and measuring emissions, ambient concentrations, deposition, and bioaccumulation of hazardous air pollutants.

(6) Prevention of significant deterioration

The provisions of part C of this subchapter (prevention of significant deterioration) shall not apply to pollutants listed under this section.

(7) Lead

The Administrator may not list elemental lead as a hazardous air pollutant under this subsection.

(c) List of source categories

(1) In general

Not later than 12 months after November 15, 1990, the Administrator shall publish, and shall from time to time, but no less often than every 8 years, revise, if appropriate, in response to public comment or new information, a list of all categories and subcategories of major sources and area sources (listed under paragraph (3)) of the air pollutants listed pur-

suant to subsection (b) of this section. To the extent practicable, the categories and subcategories listed under this subsection shall be consistent with the list of source categories established pursuant to [section 7411](#) of this title and part C of this subchapter. Nothing in the preceding sentence limits the Administrator's authority to establish subcategories under this section, as appropriate.

(2) Requirement for emissions standards

For the categories and subcategories the Administrator lists, the Administrator shall establish emissions standards under subsection (d) of this section, according to the schedule in this subsection and subsection (e) of this section.

(3) Area sources

The Administrator shall list under this subsection each category or subcategory of area sources which the Administrator finds presents a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under this section. The Administrator shall, not later than 5 years after November 15, 1990, and pursuant to subsection (k)(3)(B) of this section, list, based on actual or estimated aggregate emissions of a listed pollutant or pollutants, sufficient categories or subcategories of area sources to ensure that area sources representing 90 percent of the area source emissions of the 30 hazardous air pollutants that present the greatest threat to public health in the largest number of urban areas are subject to regulation under this section. Such regulations shall be promulgated not later than 10 years after November 15, 1990.

(4) Previously regulated categories

The Administrator may, in the Administrator's discretion, list any category or subcategory of sources previously regulated under this section as in effect before November 15, 1990.

(5) Additional categories

In addition to those categories and subcategories of sources listed for regulation pursuant to paragraphs (1) and (3), the Administrator may at any time list additional categories and subcategories of sources of hazardous air pollutants according to the same criteria for listing applicable under such paragraphs. In the case of source categories and subcategories listed after publication of the initial list required under paragraph (1) or (3), emission standards under subsection (d) of this section for the category or subcategory shall be promulgated within 10 years after November 15, 1990, or within 2 years after the date on which such category or subcategory is listed, whichever is later.

(6) Specific pollutants

With respect to alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzofurans and 2,3,7,8-tetrachlorodibenzo-p-dioxin, the Administrator shall, not later than 5 years after November 15, 1990, list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsection (d)(2) or (d)(4) of this section. Such standards shall be promulgated not later than 10 years after November 15, 1990. This paragraph shall not be construed to require the Administrator to promulgate standards for such pollutants emitted by electric utility steam generating units.

(7) Research facilities

The Administrator shall establish a separate category covering research or laboratory facilities, as necessary to assure the equitable treatment of such facilities. For purposes of this section, “research or laboratory facility” means any stationary source whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

(8) Boat manufacturing

When establishing emissions standards for styrene, the Administrator shall list boat manufacturing as a separate subcategory unless the Administrator finds that such listing would be inconsistent with the goals and requirements of this chapter.

(9) Deletions from the list

(A) Where the sole reason for the inclusion of a source category on the list required under this subsection is the emission of a unique chemical substance, the Administrator shall delete the source category from the list if it is appropriate because of action taken under either subparagraphs (C) or (D) of subsection (b)(3) of this section.

(B) The Administrator may delete any source category from the list under this subsection, on petition of any person or on the Administrator's own motion, whenever the Administrator makes the following determination or determinations, as applicable:

(i) In the case of hazardous air pollutants emitted by sources in the category that may result in cancer in humans, a determination that no source in the category (or group of sources in the case of area sources) emits such hazardous air pollutants in quantities which may cause a lifetime risk of cancer greater than one in one million to the individual in the population who is most exposed to emissions of such pollutants from the source (or group of sources in the case of area sources).

(ii) In the case of hazardous air pollutants that may result in adverse health effects in humans other than cancer or adverse environmental effects, a determination that emissions from no source in the category or subcategory concerned (or group of sources in the case of area sources) exceed a level which is adequate to protect public health with an ample margin of safety and no adverse environmental effect will result from emissions from any source (or from a group of sources in the case of area sources).

The Administrator shall grant or deny a petition under this paragraph within 1 year after the petition is filed.

(d) Emission standards

(1) In general

The Administrator shall promulgate regulations establishing emission standards for each category or subcategory of

major sources and area sources of hazardous air pollutants listed for regulation pursuant to subsection (c) of this section in accordance with the schedules provided in subsections (c) and (e) of this section. The Administrator may distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards except that, there shall be no delay in the compliance date for any standard applicable to any source under subsection (i) of this section as the result of the authority provided by this sentence.

(2) Standards and methods

Emissions standards promulgated under this subsection and applicable to new or existing sources of hazardous air pollutants shall require the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section (including a prohibition on such emissions, where achievable) that the Administrator, taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental impacts and energy requirements, determines is achievable for new or existing sources in the category or subcategory to which such emission standard applies, through application of measures, processes, methods, systems or techniques including, but not limited to, measures which--

(A) reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of materials or other modifications,

(B) enclose systems or processes to eliminate emissions,

(C) collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point,

(D) are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in subsection (h) of this section, or

(E) are a combination of the above.

None of the measures described in subparagraphs (A) through (D) shall, consistent with the provisions of [section 7414\(c\)](#) of this title, in any way compromise any United States patent or United States trademark right, or any confidential business information, or any trade secret or any other intellectual property right.

(3) New and existing sources

The maximum degree of reduction in emissions that is deemed achievable for new sources in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator. Emission standards promulgated under this subsection for existing sources in a category or subcategory may be less stringent than standards for new sources in the same category or subcategory but shall not be less stringent, and may be more stringent than--

(A) the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the

Administrator has emissions information), excluding those sources that have, within 18 months before the emission standard is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined by [section 7501](#) of this title) applicable to the source category and prevailing at the time, in the category or subcategory for categories and subcategories with 30 or more sources, or

(B) the average emission limitation achieved by the best performing 5 sources (for which the Administrator has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources.

(4) Health threshold

With respect to pollutants for which a health threshold has been established, the Administrator may consider such threshold level, with an ample margin of safety, when establishing emission standards under this subsection.

(5) Alternative standard for area sources

With respect only to categories and subcategories of area sources listed pursuant to subsection (c) of this section, the Administrator may, in lieu of the authorities provided in paragraph (2) and subsection (f) of this section, elect to promulgate standards or requirements applicable to sources in such categories or subcategories which provide for the use of generally available control technologies or management practices by such sources to reduce emissions of hazardous air pollutants.

(6) Review and revision

The Administrator shall review, and revise as necessary (taking into account developments in practices, processes, and control technologies), emission standards promulgated under this section no less often than every 8 years.

(7) Other requirements preserved

No emission standard or other requirement promulgated under this section shall be interpreted, construed or applied to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established pursuant to [section 7411](#) of this title, part C or D of this subchapter, or other authority of this chapter or a standard issued under State authority.

(8) Coke ovens

(A) Not later than December 31, 1992, the Administrator shall promulgate regulations establishing emission standards under paragraphs (2) and (3) of this subsection for coke oven batteries. In establishing such standards, the Administrator shall evaluate--

(i) the use of sodium silicate (or equivalent) luting compounds to prevent door leaks, and other operating practices

and technologies for their effectiveness in reducing coke oven emissions, and their suitability for use on new and existing coke oven batteries, taking into account costs and reasonable commercial warranties; and

(ii) as a basis for emission standards under this subsection for new coke oven batteries that begin construction after the date of proposal of such standards, the Jewell design Thompson non-recovery coke oven batteries and other non-recovery coke oven technologies, and other appropriate emission control and coke production technologies, as to their effectiveness in reducing coke oven emissions and their capability for production of steel quality coke.

Such regulations shall require at a minimum that coke oven batteries will not exceed 8 per centum leaking doors, 1 per centum leaking lids, 5 per centum leaking offtakes, and 16 seconds visible emissions per charge, with no exclusion for emissions during the period after the closing of self-sealing oven doors. Notwithstanding subsection (i) of this section, the compliance date for such emission standards for existing coke oven batteries shall be December 31, 1995.

(B) The Administrator shall promulgate work practice regulations under this subsection for coke oven batteries requiring, as appropriate--

(i) the use of sodium silicate (or equivalent) luting compounds, if the Administrator determines that use of sodium silicate is an effective means of emissions control and is achievable, taking into account costs and reasonable commercial warranties for doors and related equipment; and

(ii) door and jam cleaning practices.

Notwithstanding subsection (i) of this section, the compliance date for such work practice regulations for coke oven batteries shall be not later than the date 3 years after November 15, 1990.

(C) For coke oven batteries electing to qualify for an extension of the compliance date for standards promulgated under subsection (f) of this section in accordance with subsection (i)(8) of this section, the emission standards under this subsection for coke oven batteries shall require that coke oven batteries not exceed 8 per centum leaking doors, 1 per centum leaking lids, 5 per centum leaking offtakes, and 16 seconds visible emissions per charge, with no exclusion for emissions during the period after the closing of self-sealing doors. Notwithstanding subsection (i) of this section, the compliance date for such emission standards for existing coke oven batteries seeking an extension shall be not later than the date 3 years after November 15, 1990.

(9) Sources licensed by the Nuclear Regulatory Commission

No standard for radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement State) is required to be promulgated under this section if the Administrator determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory program established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act [42 U.S.C.A. § 2011 et seq.] for such category or subcategory provides an ample margin of safety to protect the public health. Nothing in this subsection shall

preclude or deny the right of any State or political subdivision thereof to adopt or enforce any standard or limitation respecting emissions of radionuclides which is more stringent than the standard or limitation in effect under [section 7411](#) of this title or this section.

(10) Effective date

Emission standards or other regulations promulgated under this subsection shall be effective upon promulgation.

(e) Schedule for standards and review

(1) In general

The Administrator shall promulgate regulations establishing emission standards for categories and subcategories of sources initially listed for regulation pursuant to subsection (c)(1) of this section as expeditiously as practicable, assuring that--

(A) emission standards for not less than 40 categories and subcategories (not counting coke oven batteries) shall be promulgated not later than 2 years after November 15, 1990;

(B) emission standards for coke oven batteries shall be promulgated not later than December 31, 1992;

(C) emission standards for 25 per centum of the listed categories and subcategories shall be promulgated not later than 4 years after November 15, 1990;

(D) emission standards for an additional 25 per centum of the listed categories and subcategories shall be promulgated not later than 7 years after November 15, 1990; and

(E) emission standards for all categories and subcategories shall be promulgated not later than 10 years after November 15, 1990.

(2) Priorities

In determining priorities for promulgating standards under subsection (d) of this section, the Administrator shall consider--

(A) the known or anticipated adverse effects of such pollutants on public health and the environment;

(B) the quantity and location of emissions or reasonably anticipated emissions of hazardous air pollutants that each category or subcategory will emit; and

(C) the efficiency of grouping categories or subcategories according to the pollutants emitted, or the processes or technologies used.

(3) Published schedule

Not later than 24 months after November 15, 1990, and after opportunity for comment, the Administrator shall publish a schedule establishing a date for the promulgation of emission standards for each category and subcategory of sources listed pursuant to subsection (c)(1) and (3) of this section which shall be consistent with the requirements of paragraphs (1) and (2). The determination of priorities for the promulgation of standards pursuant to this paragraph is not a rulemaking and shall not be subject to judicial review, except that, failure to promulgate any standard pursuant to the schedule established by this paragraph shall be subject to review under [section 7604](#) of this title.

(4) Judicial review

Notwithstanding [section 7607](#) of this title, no action of the Administrator adding a pollutant to the list under subsection (b) of this section or listing a source category or subcategory under subsection (c) of this section shall be a final agency action subject to judicial review, except that any such action may be reviewed under such [section 7607](#) of this title when the Administrator issues emission standards for such pollutant or category.

(5) Publicly owned treatment works

The Administrator shall promulgate standards pursuant to subsection (d) of this section applicable to publicly owned treatment works (as defined in title II of the Federal Water Pollution Control Act [[33 U.S.C.A. § 1281 et seq.](#)]) not later than 5 years after November 15, 1990.

(f) Standard to protect health and environment

(1) Report

Not later than 6 years after November 15, 1990, the Administrator shall investigate and report, after consultation with the Surgeon General and after opportunity for public comment, to Congress on--

(A) methods of calculating the risk to public health remaining, or likely to remain, from sources subject to regulation under this section after the application of standards under subsection (d) of this section;

(B) the public health significance of such estimated remaining risk and the technologically and commercially available methods and costs of reducing such risks;

(C) the actual health effects with respect to persons living in the vicinity of sources, any available epidemiological or other health studies, risks presented by background concentrations of hazardous air pollutants, any uncertainties in risk assessment methodology or other health assessment technique, and any negative health or environmental consequences to the community of efforts to reduce such risks; and

(D) recommendations as to legislation regarding such remaining risk.

(2) Emission standards

(A) If Congress does not act on any recommendation submitted under paragraph (1), the Administrator shall, within 8 years after promulgation of standards for each category or subcategory of sources pursuant to subsection (d) of this section, promulgate standards for such category or subcategory if promulgation of such standards is required in order to provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990) or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. Emission standards promulgated under this subsection shall provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990), unless the Administrator determines that a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. If standards promulgated pursuant to subsection (d) of this section and applicable to a category or subcategory of sources emitting a pollutant (or pollutants) classified as a known, probable or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million, the Administrator shall promulgate standards under this subsection for such source category.

(B) Nothing in subparagraph (A) or in any other provision of this section shall be construed as affecting, or applying to the Administrator's interpretation of this section, as in effect before November 15, 1990, and set forth in the Federal Register of September 14, 1989 ([54 Federal Register 38044](#)).

(C) The Administrator shall determine whether or not to promulgate such standards and, if the Administrator decides to promulgate such standards, shall promulgate the standards 8 years after promulgation of the standards under subsection (d) of this section for each source category or subcategory concerned. In the case of categories or subcategories for which standards under subsection (d) of this section are required to be promulgated within 2 years after November 15, 1990, the Administrator shall have 9 years after promulgation of the standards under subsection (d) of this section to make the determination under the preceding sentence and, if required, to promulgate the standards under this paragraph.

(3) Effective date

Any emission standard established pursuant to this subsection shall become effective upon promulgation.

(4) Prohibition

No air pollutant to which a standard under this subsection applies may be emitted from any stationary source in violation of such standard, except that in the case of an existing source--

(A) such standard shall not apply until 90 days after its effective date, and

(B) the Administrator may grant a waiver permitting such source a period of up to 2 years after the effective date of

a standard to comply with the standard if the Administrator finds that such period is necessary for the installation of controls and that steps will be taken during the period of the waiver to assure that the health of persons will be protected from imminent endangerment.

(5) Area sources

The Administrator shall not be required to conduct any review under this subsection or promulgate emission limitations under this subsection for any category or subcategory of area sources that is listed pursuant to subsection (c)(3) of this section and for which an emission standard is promulgated pursuant to subsection (d)(5) of this section.

(6) Unique chemical substances

In establishing standards for the control of unique chemical substances of listed pollutants without CAS numbers under this subsection, the Administrator shall establish such standards with respect to the health and environmental effects of the substances actually emitted by sources and direct transformation byproducts of such emissions in the categories and subcategories.

(g) Modifications

(1) Offsets

(A) A physical change in, or change in the method of operation of, a major source which results in a greater than de minimis increase in actual emissions of a hazardous air pollutant shall not be considered a modification, if such increase in the quantity of actual emissions of any hazardous air pollutant from such source will be offset by an equal or greater decrease in the quantity of emissions of another hazardous air pollutant (or pollutants) from such source which is deemed more hazardous, pursuant to guidance issued by the Administrator under subparagraph (B). The owner or operator of such source shall submit a showing to the Administrator (or the State) that such increase has been offset under the preceding sentence.

(B) The Administrator shall, after notice and opportunity for comment and not later than 18 months after November 15, 1990, publish guidance with respect to implementation of this subsection. Such guidance shall include an identification, to the extent practicable, of the relative hazard to human health resulting from emissions to the ambient air of each of the pollutants listed under subsection (b) of this section sufficient to facilitate the offset showing authorized by subparagraph (A). Such guidance shall not authorize offsets between pollutants where the increased pollutant (or more than one pollutant in a stream of pollutants) causes adverse effects to human health for which no safety threshold for exposure can be determined unless there are corresponding decreases in such types of pollutant(s).

(2) Construction, reconstruction and modifications

(A) After the effective date of a permit program under subchapter V of this chapter in any State, no person may modify a major source of hazardous air pollutants in such State, unless the Administrator (or the State) determines that the maximum achievable control technology emission limitation under this section for existing sources will be met. Such determination shall be made on a case-by-case basis where no applicable emissions limitations have been established by the Administrator.

(B) After the effective date of a permit program under subchapter V of this chapter in any State, no person may construct or reconstruct any major source of hazardous air pollutants, unless the Administrator (or the State) determines that the maximum achievable control technology emission limitation under this section for new sources will be met. Such determination shall be made on a case-by-case basis where no applicable emission limitations have been established by the Administrator.

(3) Procedures for modifications

The Administrator (or the State) shall establish reasonable procedures for assuring that the requirements applying to modifications under this section are reflected in the permit.

(h) Work practice standards and other requirements

(1) In general

For purposes of this section, if it is not feasible in the judgment of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in the Administrator's judgment is consistent with the provisions of subsection (d) or (f) of this section. In the event the Administrator promulgates a design or equipment standard under this subsection, the Administrator shall include as part of such standard such requirements as will assure the proper operation and maintenance of any such element of design or equipment.

(2) Definition

For the purpose of this subsection, the phrase "not feasible to prescribe or enforce an emission standard" means any situation in which the Administrator determines that--

(A) a hazardous air pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, State or local law, or

(B) the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

(3) Alternative standard

If after notice and opportunity for comment, the owner or operator of any source establishes to the satisfaction of the Administrator that an alternative means of emission limitation will achieve a reduction in emissions of any air pollutant at least equivalent to the reduction in emissions of such pollutant achieved under the requirements of paragraph (1), the Administrator shall permit the use of such alternative by the source for purposes of compliance with this section with respect to such pollutant.

(4) Numerical standard required

Any standard promulgated under paragraph (1) shall be promulgated in terms of an emission standard whenever it is feasible to promulgate and enforce a standard in such terms.

(i) Schedule for compliance

(1) Preconstruction and operating requirements

After the effective date of any emission standard, limitation, or regulation under subsection (d), (f) or (h) of this section, no person may construct any new major source or reconstruct any existing major source subject to such emission standard, regulation or limitation unless the Administrator (or a State with a permit program approved under subchapter V of this chapter) determines that such source, if properly constructed, reconstructed and operated, will comply with the standard, regulation or limitation.

(2) Special rule

Notwithstanding the requirements of paragraph (1), a new source which commences construction or reconstruction after a standard, limitation or regulation applicable to such source is proposed and before such standard, limitation or regulation is promulgated shall not be required to comply with such promulgated standard until the date 3 years after the date of promulgation if--

(A) the promulgated standard, limitation or regulation is more stringent than the standard, limitation or regulation proposed; and

(B) the source complies with the standard, limitation, or regulation as proposed during the 3-year period immediately after promulgation.

(3) Compliance schedule for existing sources

(A) After the effective date of any emissions standard, limitation or regulation promulgated under this section and applicable to a source, no person may operate such source in violation of such standard, limitation or regulation except, in the case of an existing source, the Administrator shall establish a compliance date or dates for each category or subcategory of existing sources, which shall provide for compliance as expeditiously as practicable, but in no event later than 3 years after the effective date of such standard, except as provided in subparagraph (B) and paragraphs (4) through (8).

(B) The Administrator (or a State with a program approved under subchapter V of this chapter) may issue a permit that grants an extension permitting an existing source up to 1 additional year to comply with standards under subsection (d) of this section if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations, if the 4-year compliance time is insufficient to dry and cover mining waste in order to reduce emissions of any pollutant listed under subsection (b) of this section.

(4) Presidential exemption

The President may exempt any stationary source from compliance with any standard or limitation under this section for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for 1 or more additional periods, each period not to exceed 2 years. The President shall report to Congress with respect to each exemption (or extension thereof) made under this paragraph.

(5) Early reduction

(A) The Administrator (or a State acting pursuant to a permit program approved under subchapter V of this chapter) shall issue a permit allowing an existing source, for which the owner or operator demonstrates that the source has achieved a reduction of 90 per centum or more in emissions of hazardous air pollutants (95 per centum in the case of hazardous air pollutants which are particulates) from the source, to meet an alternative emission limitation reflecting such reduction in lieu of an emission limitation promulgated under subsection (d) of this section for a period of 6 years from the compliance date for the otherwise applicable standard, provided that such reduction is achieved before the otherwise applicable standard under subsection (d) of this section is first proposed. Nothing in this paragraph shall preclude a State from requiring reductions in excess of those specified in this subparagraph as a condition of granting the extension authorized by the previous sentence.

(B) An existing source which achieves the reduction referred to in subparagraph (A) after the proposal of an applicable standard but before January 1, 1994, may qualify under subparagraph (A), if the source makes an enforceable commitment to achieve such reduction before the proposal of the standard. Such commitment shall be enforceable to the same extent as a regulation under this section.

(C) The reduction shall be determined with respect to verifiable and actual emissions in a base year not earlier than calendar year 1987, provided that, there is no evidence that emissions in the base year are artificially or substantially greater than emissions in other years prior to implementation of emissions reduction measures. The Administrator may allow a source to use a baseline year of 1985 or 1986 provided that the source can demonstrate to the satisfaction of the Administrator that emissions data for the source reflects verifiable data based on information for such source, received by the Administrator prior to November 15, 1990, pursuant to an information request issued under [section 7414](#) of this title.

(D) For each source granted an alternative emission limitation under this paragraph there shall be established by a permit issued pursuant to subchapter V of this chapter an enforceable emission limitation for hazardous air pollutants reflecting the reduction which qualifies the source for an alternative emission limitation under this paragraph. An alternative emission limitation under this paragraph shall not be available with respect to standards or requirements promulgated pursuant to subsection (f) of this section and the Administrator shall, for the purpose of determining whether a standard under subsection (f) of this section is necessary, review emissions from sources granted an alternative emission limitation under this paragraph at the same time that other sources in the category or subcategory are reviewed.

(E) With respect to pollutants for which high risks of adverse public health effects may be associated with exposure to small quantities including, but not limited to, chlorinated dioxins and furans, the Administrator shall by regulation limit the use of offsetting reductions in emissions of other hazardous air pollutants from the source as counting toward the 90 per centum reduction in such high-risk pollutants qualifying for an alternative emissions limitation under this para-

graph.

(6) Other reductions

Notwithstanding the requirements of this section, no existing source that has installed--

(A) best available control technology (as defined in [section 7479\(3\)](#) of this title), or

(B) technology required to meet a lowest achievable emission rate (as defined in [section 7501](#) of this title),

prior to the promulgation of a standard under this section applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to an action described in subparagraph (A) or (B) shall be required to comply with such standard under this section until the date 5 years after the date on which such installation or reduction has been achieved, as determined by the Administrator. The Administrator may issue such rules and guidance as are necessary to implement this paragraph.

(7) Extension for new sources

A source for which construction or reconstruction is commenced after the date an emission standard applicable to such source is proposed pursuant to subsection (d) of this section but before the date an emission standard applicable to such source is proposed pursuant to subsection (f) of this section shall not be required to comply with the emission standard under subsection (f) of this section until the date 10 years after the date construction or reconstruction is commenced.

(8) Coke ovens

(A) Any coke oven battery that complies with the emission limitations established under subsection (d)(8)(C) of this section, subparagraph (B), and subparagraph (C), and complies with the provisions of subparagraph (E), shall not be required to achieve emission limitations promulgated under subsection (f) of this section until January 1, 2020.

(B)(i) Not later than December 31, 1992, the Administrator shall promulgate emission limitations for coke oven emissions from coke oven batteries. Notwithstanding paragraph (3) of this subsection, the compliance date for such emission limitations for existing coke oven batteries shall be January 1, 1998. Such emission limitations shall reflect the lowest achievable emission rate as defined in [section 7501](#) of this title for a coke oven battery that is rebuilt or a replacement at a coke oven plant for an existing battery. Such emission limitations shall be no less stringent than--

(I) 3 per centum leaking doors (5 per centum leaking doors for six meter batteries);

(II) 1 per centum leaking lids;

(III) 4 per centum leaking offtakes; and

(IV) 16 seconds visible emissions per charge,

with an exclusion for emissions during the period after the closing of self-sealing oven doors (or the total mass emissions equivalent). The rulemaking in which such emission limitations are promulgated shall also establish an appropriate measurement methodology for determining compliance with such emission limitations, and shall establish such emission limitations in terms of an equivalent level of mass emissions reduction from a coke oven battery, unless the Administrator finds that such a mass emissions standard would not be practicable or enforceable. Such measurement methodology, to the extent it measures leaking doors, shall take into consideration alternative test methods that reflect the best technology and practices actually applied in the affected industries, and shall assure that the final test methods are consistent with the performance of such best technology and practices.

(ii) If the Administrator fails to promulgate such emission limitations under this subparagraph prior to the effective date of such emission limitations, the emission limitations applicable to coke oven batteries under this subparagraph shall be--

(I) 3 per centum leaking doors (5 per centum leaking doors for six meter batteries);

(II) 1 per centum leaking lids;

(III) 4 per centum leaking offtakes; and

(IV) 16 seconds visible emissions per charge,

or the total mass emissions equivalent (if the total mass emissions equivalent is determined to be practicable and enforceable), with no exclusion for emissions during the period after the closing of self-sealing oven doors.

(C) Not later than January 1, 2007, the Administrator shall review the emission limitations promulgated under subparagraph (B) and revise, as necessary, such emission limitations to reflect the lowest achievable emission rate as defined in [section 7501](#) of this title at the time for a coke oven battery that is rebuilt or a replacement at a coke oven plant for an existing battery. Such emission limitations shall be no less stringent than the emission limitation promulgated under subparagraph (B). Notwithstanding paragraph (2) of this subsection, the compliance date for such emission limitations for existing coke oven batteries shall be January 1, 2010.

(D) At any time prior to January 1, 1998, the owner or operator of any coke oven battery may elect to comply with emission limitations promulgated under subsection (f) of this section by the date such emission limitations would otherwise apply to such coke oven battery, in lieu of the emission limitations and the compliance dates provided under subparagraphs (B) and (C) of this paragraph. Any such owner or operator shall be legally bound to comply with such emission limitations promulgated under subsection (f) of this section with respect to such coke oven battery as of January 1, 2003. If no such emission limitations have been promulgated for such coke oven battery, the Administrator shall promulgate such emission limitations in accordance with subsection (f) of this section for such coke oven battery.

(E) Coke oven batteries qualifying for an extension under subparagraph (A) shall make available not later than January 1, 2000, to the surrounding communities the results of any risk assessment performed by the Administrator to determine the appropriate level of any emission standard established by the Administrator pursuant to subsection (f) of this section.

(F) Notwithstanding the provisions of this section, reconstruction of any source of coke oven emissions qualifying for an extension under this paragraph shall not subject such source to emission limitations under subsection (f) of this section more stringent than those established under subparagraphs (B) and (C) until January 1, 2020. For the purposes of this subparagraph, the term “reconstruction” includes the replacement of existing coke oven battery capacity with new coke oven batteries of comparable or lower capacity and lower potential emissions.

(j) Equivalent emission limitation by permit

(1) Effective date

The requirements of this subsection shall apply in each State beginning on the effective date of a permit program established pursuant to subchapter V of this chapter in such State, but not prior to the date 42 months after November 15, 1990.

(2) Failure to promulgate a standard

In the event that the Administrator fails to promulgate a standard for a category or subcategory of major sources by the date established pursuant to subsection (e)(1) and (3) of this section, and beginning 18 months after such date (but not prior to the effective date of a permit program under subchapter V of this chapter), the owner or operator of any major source in such category or subcategory shall submit a permit application under paragraph (3) and such owner or operator shall also comply with paragraphs (5) and (6).

(3) Applications

By the date established by paragraph (2), the owner or operator of a major source subject to this subsection shall file an application for a permit. If the owner or operator of a source has submitted a timely and complete application for a permit required by this subsection, any failure to have a permit shall not be a violation of paragraph (2), unless the delay in final action is due to the failure of the applicant to timely submit information required or requested to process the application. The Administrator shall not later than 18 months after November 15, 1990, and after notice and opportunity for comment, establish requirements for applications under this subsection including a standard application form and criteria for determining in a timely manner the completeness of applications.

(4) Review and approval

Permit applications submitted under this subsection shall be reviewed and approved or disapproved according to the provisions of [section 7661d](#) of this title. In the event that the Administrator (or the State) disapproves a permit application submitted under this subsection or determines that the application is incomplete, the applicant shall have up to 6 months to revise the application to meet the objections of the Administrator (or the State).

(5) Emission limitation

The permit shall be issued pursuant to subchapter V of this chapter and shall contain emission limitations for the hazardous air pollutants subject to regulation under this section and emitted by the source that the Administrator (or the State) determines, on a case-by-case basis, to be equivalent to the limitation that would apply to such source if an emission standard had been promulgated in a timely manner under subsection (d) of this section. In the alternative, if the applicable criteria are met, the permit may contain an emissions limitation established according to the provisions of subsection (i)(5) of this section. For purposes of the preceding sentence, the reduction required by subsection (i)(5)(A) of this section shall be achieved by the date on which the relevant standard should have been promulgated under subsection (d) of this section. No such pollutant may be emitted in amounts exceeding an emission limitation contained in a permit immediately for new sources and, as expeditiously as practicable, but not later than the date 3 years after the permit is issued for existing sources or such other compliance date as would apply under subsection (i) of this section.

(6) Applicability of subsequent standards

If the Administrator promulgates an emission standard that is applicable to the major source prior to the date on which a permit application is approved, the emission limitation in the permit shall reflect the promulgated standard rather than the emission limitation determined pursuant to paragraph (5), provided that the source shall have the compliance period provided under subsection (i) of this section. If the Administrator promulgates a standard under subsection (d) of this section that would be applicable to the source in lieu of the emission limitation established by permit under this subsection after the date on which the permit has been issued, the Administrator (or the State) shall revise such permit upon the next renewal to reflect the standard promulgated by the Administrator providing such source a reasonable time to comply, but no longer than 8 years after such standard is promulgated or 8 years after the date on which the source is first required to comply with the emissions limitation established by paragraph (5), whichever is earlier.

(k) Area source program

(1) Findings and purpose

The Congress finds that emissions of hazardous air pollutants from area sources may individually, or in the aggregate, present significant risks to public health in urban areas. Considering the large number of persons exposed and the risks of carcinogenic and other adverse health effects from hazardous air pollutants, ambient concentrations characteristic of large urban areas should be reduced to levels substantially below those currently experienced. It is the purpose of this subsection to achieve a substantial reduction in emissions of hazardous air pollutants from area sources and an equivalent reduction in the public health risks associated with such sources including a reduction of not less than 75 per centum in the incidence of cancer attributable to emissions from such sources.

(2) Research program

The Administrator shall, after consultation with State and local air pollution control officials, conduct a program of research with respect to sources of hazardous air pollutants in urban areas and shall include within such program--

(A) ambient monitoring for a broad range of hazardous air pollutants (including, but not limited to, volatile organic compounds, metals, pesticides and products of incomplete combustion) in a representative number of urban loca-

tions;

(B) analysis to characterize the sources of such pollution with a focus on area sources and the contribution that such sources make to public health risks from hazardous air pollutants; and

(C) consideration of atmospheric transformation and other factors which can elevate public health risks from such pollutants.

Health effects considered under this program shall include, but not be limited to, carcinogenicity, mutagenicity, teratogenicity, neurotoxicity, reproductive dysfunction and other acute and chronic effects including the role of such pollutants as precursors of ozone or acid aerosol formation. The Administrator shall report the preliminary results of such research not later than 3 years after November 15, 1990.

(3) National strategy

(A) Considering information collected pursuant to the monitoring program authorized by paragraph (2), the Administrator shall, not later than 5 years after November 15, 1990, and after notice and opportunity for public comment, prepare and transmit to the Congress a comprehensive strategy to control emissions of hazardous air pollutants from area sources in urban areas.

(B) The strategy shall--

(i) identify not less than 30 hazardous air pollutants which, as the result of emissions from area sources, present the greatest threat to public health in the largest number of urban areas and that are or will be listed pursuant to subsection (b) of this section, and

(ii) identify the source categories or subcategories emitting such pollutants that are or will be listed pursuant to subsection (c) of this section. When identifying categories and subcategories of sources under this subparagraph, the Administrator shall assure that sources accounting for 90 per centum or more of the aggregate emissions of each of the 30 identified hazardous air pollutants are subject to standards pursuant to subsection (d) of this section.

(C) The strategy shall include a schedule of specific actions to substantially reduce the public health risks posed by the release of hazardous air pollutants from area sources that will be implemented by the Administrator under the authority of this or other laws (including, but not limited to, the Toxic Substances Control Act [15 U.S.C.A. § 2601 et seq.], the Federal Insecticide, Fungicide and Rodenticide Act [7 U.S.C.A. § 136 et seq.] and the Resource Conservation and Recovery Act [42 U.S.C.A. § 6901 et seq.]) or by the States. The strategy shall achieve a reduction in the incidence of cancer attributable to exposure to hazardous air pollutants emitted by stationary sources of not less than 75 per centum, considering control of emissions of hazardous air pollutants from all stationary sources and resulting from measures implemented by the Administrator or by the States under this or other laws.

(D) The strategy may also identify research needs in monitoring, analytical methodology, modeling or pollution con-

trol techniques and recommendations for changes in law that would further the goals and objectives of this subsection.

(E) Nothing in this subsection shall be interpreted to preclude or delay implementation of actions with respect to area sources of hazardous air pollutants under consideration pursuant to this or any other law and that may be promulgated before the strategy is prepared.

(F) The Administrator shall implement the strategy as expeditiously as practicable assuring that all sources are in compliance with all requirements not later than 9 years after November 15, 1990.

(G) As part of such strategy the Administrator shall provide for ambient monitoring and emissions modeling in urban areas as appropriate to demonstrate that the goals and objectives of the strategy are being met.

(4) Areawide activities

In addition to the national urban air toxics strategy authorized by paragraph (3), the Administrator shall also encourage and support areawide strategies developed by State or local air pollution control agencies that are intended to reduce risks from emissions by area sources within a particular urban area. From the funds available for grants under this section, the Administrator shall set aside not less than 10 per centum to support areawide strategies addressing hazardous air pollutants emitted by area sources and shall award such funds on a demonstration basis to those States with innovative and effective strategies. At the request of State or local air pollution control officials, the Administrator shall prepare guidelines for control technologies or management practices which may be applicable to various categories or subcategories of area sources.

(5) Report

The Administrator shall report to the Congress at intervals not later than 8 and 12 years after November 15, 1990, on actions taken under this subsection and other parts of this chapter to reduce the risk to public health posed by the release of hazardous air pollutants from area sources. The reports shall also identify specific metropolitan areas that continue to experience high risks to public health as the result of emissions from area sources.

(I) State programs

(1) In general

Each State may develop and submit to the Administrator for approval a program for the implementation and enforcement (including a review of enforcement delegations previously granted) of emission standards and other requirements for air pollutants subject to this section or requirements for the prevention and mitigation of accidental releases pursuant to subsection (r) of this section. A program submitted by a State under this subsection may provide for partial or complete delegation of the Administrator's authorities and responsibilities to implement and enforce emissions standards and prevention requirements but shall not include authority to set standards less stringent than those promulgated by the Administrator under this chapter.

(2) Guidance

Not later than 12 months after November 15, 1990, the Administrator shall publish guidance that would be useful to the States in developing programs for submittal under this subsection. The guidance shall also provide for the registration of all facilities producing, processing, handling or storing any substance listed pursuant to subsection (r) of this section in amounts greater than the threshold quantity. The Administrator shall include as an element in such guidance an optional program begun in 1986 for the review of high-risk point sources of air pollutants including, but not limited to, hazardous air pollutants listed pursuant to subsection (b) of this section.

(3) Technical assistance

The Administrator shall establish and maintain an air toxics clearinghouse and center to provide technical information and assistance to State and local agencies and, on a cost recovery basis, to others on control technology, health and ecological risk assessment, risk analysis, ambient monitoring and modeling, and emissions measurement and monitoring. The Administrator shall use the authority of [section 7403](#) of this title to examine methods for preventing, measuring, and controlling emissions and evaluating associated health and ecological risks. Where appropriate, such activity shall be conducted with not-for-profit organizations. The Administrator may conduct research on methods for preventing, measuring and controlling emissions and evaluating associated health and environment risks. All information collected under this paragraph shall be available to the public.

(4) Grants

Upon application of a State, the Administrator may make grants, subject to such terms and conditions as the Administrator deems appropriate, to such State for the purpose of assisting the State in developing and implementing a program for submittal and approval under this subsection. Programs assisted under this paragraph may include program elements addressing air pollutants or extremely hazardous substances other than those specifically subject to this section. Grants under this paragraph may include support for high-risk point source review as provided in paragraph (2) and support for the development and implementation of areawide area source programs pursuant to subsection (k) of this section.

(5) Approval or disapproval

Not later than 180 days after receiving a program submitted by a State, and after notice and opportunity for public comment, the Administrator shall either approve or disapprove such program. The Administrator shall disapprove any program submitted by a State, if the Administrator determines that--

(A) the authorities contained in the program are not adequate to assure compliance by all sources within the State with each applicable standard, regulation or requirement established by the Administrator under this section;

(B) adequate authority does not exist, or adequate resources are not available, to implement the program;

(C) the schedule for implementing the program and assuring compliance by affected sources is not sufficiently expeditious; or

(D) the program is otherwise not in compliance with the guidance issued by the Administrator under paragraph (2) or is not likely to satisfy, in whole or in part, the objectives of this chapter.

If the Administrator disapproves a State program, the Administrator shall notify the State of any revisions or modifications necessary to obtain approval. The State may revise and resubmit the proposed program for review and approval pursuant to the provisions of this subsection.

(6) Withdrawal

Whenever the Administrator determines, after public hearing, that a State is not administering and enforcing a program approved pursuant to this subsection in accordance with the guidance published pursuant to paragraph (2) or the requirements of paragraph (5), the Administrator shall so notify the State and, if action which will assure prompt compliance is not taken within 90 days, the Administrator shall withdraw approval of the program. The Administrator shall not withdraw approval of any program unless the State shall have been notified and the reasons for withdrawal shall have been stated in writing and made public.

(7) Authority to enforce

Nothing in this subsection shall prohibit the Administrator from enforcing any applicable emission standard or requirement under this section.

(8) Local program

The Administrator may, after notice and opportunity for public comment, approve a program developed and submitted by a local air pollution control agency (after consultation with the State) pursuant to this subsection and any such agency implementing an approved program may take any action authorized to be taken by a State under this section.

(9) Permit authority

Nothing in this subsection shall affect the authorities and obligations of the Administrator or the State under subchapter V of this chapter.

(m) Atmospheric deposition to Great Lakes and coastal waters

(1) Deposition assessment

The Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall conduct a program to identify and assess the extent of atmospheric deposition of hazardous air pollutants (and in the discretion of the Administrator, other air pollutants) to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters. As part of such program, the Administrator shall--

(A) monitor the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters, including monitoring of the Great Lakes through the monitoring network established pursuant to paragraph (2) of this subsection and designing

and deploying an atmospheric monitoring network for coastal waters pursuant to paragraph (4);

(B) investigate the sources and deposition rates of atmospheric deposition of air pollutants (and their atmospheric transformation precursors);

(C) conduct research to develop and improve monitoring methods and to determine the relative contribution of atmospheric pollutants to total pollution loadings to the Great Lakes, the Chesapeake Bay, Lake Champlain, and coastal waters;

(D) evaluate any adverse effects to public health or the environment caused by such deposition (including effects resulting from indirect exposure pathways) and assess the contribution of such deposition to violations of water quality standards established pursuant to the Federal Water Pollution Control Act [33 U.S.C.A. § 1251 *et seq.*] and drinking water standards established pursuant to the Safe Drinking Water Act [42 U.S.C.A. § 300f *et seq.*]; and

(E) sample for such pollutants in biota, fish, and wildlife of the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters and characterize the sources of such pollutants.

(2) Great Lakes monitoring network

The Administrator shall oversee, in accordance with Annex 15 of the Great Lakes Water Quality Agreement, the establishment and operation of a Great Lakes atmospheric deposition network to monitor atmospheric deposition of hazardous air pollutants (and in the Administrator's discretion, other air pollutants) to the Great Lakes.

(A) As part of the network provided for in this paragraph, and not later than December 31, 1991, the Administrator shall establish in each of the 5 Great Lakes at least 1 facility capable of monitoring the atmospheric deposition of hazardous air pollutants in both dry and wet conditions.

(B) The Administrator shall use the data provided by the network to identify and track the movement of hazardous air pollutants through the Great Lakes, to determine the portion of water pollution loadings attributable to atmospheric deposition of such pollutants, and to support development of remedial action plans and other management plans as required by the Great Lakes Water Quality Agreement.

(C) The Administrator shall assure that the data collected by the Great Lakes atmospheric deposition monitoring network is in a format compatible with databases sponsored by the International Joint Commission, Canada, and the several States of the Great Lakes region.

(3) Monitoring for the Chesapeake Bay and Lake Champlain

The Administrator shall establish at the Chesapeake Bay and Lake Champlain atmospheric deposition stations to monitor deposition of hazardous air pollutants (and in the Administrator's discretion, other air pollutants) within the Chesapeake Bay and Lake Champlain watersheds. The Administrator shall determine the role of air deposition in the pollut-

ant loadings of the Chesapeake Bay and Lake Champlain, investigate the sources of air pollutants deposited in the watersheds, evaluate the health and environmental effects of such pollutant loadings, and shall sample such pollutants in biota, fish and wildlife within the watersheds, as necessary to characterize such effects.

(4) Monitoring for coastal waters

The Administrator shall design and deploy atmospheric deposition monitoring networks for coastal waters and their watersheds and shall make any information collected through such networks available to the public. As part of this effort, the Administrator shall conduct research to develop and improve deposition monitoring methods, and to determine the relative contribution of atmospheric pollutants to pollutant loadings. For purposes of this subsection, “coastal waters” shall mean estuaries selected pursuant to section 320(a)(2)(A) of the Federal Water Pollution Control Act [33 U.S.C.A. § 1330(a)(2)(A)] or listed pursuant to section 320(a)(2)(B) of such Act [33 U.S.C.A. § 1330(a)(2)(B)] or estuarine research reserves designated pursuant to [section 1461 of Title 16](#).

(5) Report

Within 3 years of November 15, 1990, and biennially thereafter, the Administrator, in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall submit to the Congress a report on the results of any monitoring, studies, and investigations conducted pursuant to this subsection. Such report shall include, at a minimum, an assessment of--

(A) the contribution of atmospheric deposition to pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;

(B) the environmental and public health effects of any pollution which is attributable to atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters;

(C) the source or sources of any pollution to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters which is attributable to atmospheric deposition;

(D) whether pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain or coastal waters cause or contribute to exceedances [FN2] of drinking water standards pursuant to the Safe Drinking Water Act [42 U.S.C.A. § 300f et seq.] or water quality standards pursuant to the Federal Water Pollution Control Act [33 U.S.C.A. § 1251 et seq.] or, with respect to the Great Lakes, exceedances [FN2] of the specific objectives of the Great Lakes Water Quality Agreement; and

(E) a description of any revisions of the requirements, standards, and limitations pursuant to this chapter and other applicable Federal laws as are necessary to assure protection of human health and the environment.

(6) Additional regulation

As part of the report to Congress, the Administrator shall determine whether the other provisions of this section are ad-

equate to prevent serious adverse effects to public health and serious or widespread environmental effects, including such effects resulting from indirect exposure pathways, associated with atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and coastal waters of hazardous air pollutants (and their atmospheric transformation products). The Administrator shall take into consideration the tendency of such pollutants to bioaccumulate. Within 5 years after November 15, 1990, the Administrator shall, based on such report and determination, promulgate, in accordance with this section, such further emission standards or control measures as may be necessary and appropriate to prevent such effects, including effects due to bioaccumulation and indirect exposure pathways. Any requirements promulgated pursuant to this paragraph with respect to coastal waters shall only apply to the coastal waters of the States which are subject to [section 7627\(a\)](#) of this title.

(n) Other provisions

(1) Electric utility steam generating units

(A) The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units of pollutants listed under subsection (b) of this section after imposition of the requirements of this chapter. The Administrator shall report the results of this study to the Congress within 3 years after November 15, 1990. The Administrator shall develop and describe in the Administrator's report to Congress alternative control strategies for emissions which may warrant regulation under this section. The Administrator shall regulate electric utility steam generating units under this section, if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.

(B) The Administrator shall conduct, and transmit to the Congress not later than 4 years after November 15, 1990, a study of mercury emissions from electric utility steam generating units, municipal waste combustion units, and other sources, including area sources. Such study shall consider the rate and mass of such emissions, the health and environmental effects of such emissions, technologies which are available to control such emissions, and the costs of such technologies.

(C) The National Institute of Environmental Health Sciences shall conduct, and transmit to the Congress not later than 3 years after November 15, 1990, a study to determine the threshold level of mercury exposure below which adverse human health effects are not expected to occur. Such study shall include a threshold for mercury concentrations in the tissue of fish which may be consumed (including consumption by sensitive populations) without adverse effects to public health.

(2) Coke oven production technology study

(A) The Secretary of the Department of Energy and the Administrator shall jointly undertake a 6-year study to assess coke oven production emission control technologies and to assist in the development and commercialization of technically practicable and economically viable control technologies which have the potential to significantly reduce emissions of hazardous air pollutants from coke oven production facilities. In identifying control technologies, the Secretary and the Administrator shall consider the range of existing coke oven operations and battery design and the availability of sources of materials for such coke ovens as well as alternatives to existing coke oven production design.

(B) The Secretary and the Administrator are authorized to enter into agreements with persons who propose to develop, install and operate coke production emission control technologies which have the potential for significant emissions reductions of hazardous air pollutants provided that Federal funds shall not exceed 50 per centum of the cost of any project assisted pursuant to this paragraph.

(C) On completion of the study, the Secretary shall submit to Congress a report on the results of the study and shall make recommendations to the Administrator identifying practicable and economically viable control technologies for coke oven production facilities to reduce residual risks remaining after implementation of the standard under subsection (d) of this section.

(D) There are authorized to be appropriated \$5,000,000 for each of the fiscal years 1992 through 1997 to carry out the program authorized by this paragraph.

(3) Publicly owned treatment works

The Administrator may conduct, in cooperation with the owners and operators of publicly owned treatment works, studies to characterize emissions of hazardous air pollutants emitted by such facilities, to identify industrial, commercial and residential discharges that contribute to such emissions and to demonstrate control measures for such emissions. When promulgating any standard under this section applicable to publicly owned treatment works, the Administrator may provide for control measures that include pretreatment of discharges causing emissions of hazardous air pollutants and process or product substitutions or limitations that may be effective in reducing such emissions. The Administrator may prescribe uniform sampling, modeling and risk assessment methods for use in implementing this subsection.

(4) Oil and gas wells; pipeline facilities

(A) Notwithstanding the provisions of subsection (a) of this section, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources, and in the case of any oil or gas exploration or production well (with its associated equipment), such emissions shall not be aggregated for any purpose under this section.

(B) The Administrator shall not list oil and gas production wells (with its associated equipment) as an area source category under subsection (c) of this section, except that the Administrator may establish an area source category for oil and gas production wells located in any metropolitan statistical area or consolidated metropolitan statistical area with a population in excess of 1 million, if the Administrator determines that emissions of hazardous air pollutants from such wells present more than a negligible risk of adverse effects to public health.

(5) Hydrogen sulfide

The Administrator is directed to assess the hazards to public health and the environment resulting from the emission of hydrogen sulfide associated with the extraction of oil and natural gas resources. To the extent practicable, the assess-

ment shall build upon and not duplicate work conducted for an assessment pursuant to section 8002(m) of the Solid Waste Disposal Act [42 U.S.C.A. § 6982(m)] and shall reflect consultation with the States. The assessment shall include a review of existing State and industry control standards, techniques and enforcement. The Administrator shall report to the Congress within 24 months after November 15, 1990, with the findings of such assessment, together with any recommendations, and shall, as appropriate, develop and implement a control strategy for emissions of hydrogen sulfide to protect human health and the environment, based on the findings of such assessment, using authorities under this chapter including sections [FN3] 7411 of this title and this section.

(6) Hydrofluoric acid

Not later than 2 years after November 15, 1990, the Administrator shall, for those regions of the country which do not have comprehensive health and safety regulations with respect to hydrofluoric acid, complete a study of the potential hazards of hydrofluoric acid and the uses of hydrofluoric acid in industrial and commercial applications to public health and the environment considering a range of events including worst-case accidental releases and shall make recommendations to the Congress for the reduction of such hazards, if appropriate.

(7) RCRA facilities

In the case of any category or subcategory of sources the air emissions of which are regulated under subtitle C of the Solid Waste Disposal Act [42 U.S.C.A. § 6921 et seq.], the Administrator shall take into account any regulations of such emissions which are promulgated under such subtitle and shall, to the maximum extent practicable and consistent with the provisions of this section, ensure that the requirements of such subtitle and this section are consistent.

(o) National Academy of Sciences study

(1) Request of the Academy

Within 3 months of November 15, 1990, the Administrator shall enter into appropriate arrangements with the National Academy of Sciences to conduct a review of--

(A) risk assessment methodology used by the Environmental Protection Agency to determine the carcinogenic risk associated with exposure to hazardous air pollutants from source categories and subcategories subject to the requirements of this section; and

(B) improvements in such methodology.

(2) Elements to be studied

In conducting such review, the National Academy of Sciences should consider, but not be limited to, the following--

(A) the techniques used for estimating and describing the carcinogenic potency to humans of hazardous air pollutants; and

(B) the techniques used for estimating exposure to hazardous air pollutants (for hypothetical and actual maximally exposed individuals as well as other exposed individuals).

(3) Other health effects of concern

To the extent practicable, the Academy shall evaluate and report on the methodology for assessing the risk of adverse human health effects other than cancer for which safe thresholds of exposure may not exist, including, but not limited to, inheritable genetic mutations, birth defects, and reproductive dysfunctions.

(4) Report

A report on the results of such review shall be submitted to the Senate Committee on Environment and Public Works, the House Committee on Energy and Commerce, the Risk Assessment and Management Commission established by section 303 of the Clean Air Act Amendments of 1990 and the Administrator not later than 30 months after November 15, 1990.

(5) Assistance

The Administrator shall assist the Academy in gathering any information the Academy deems necessary to carry out this subsection. The Administrator may use any authority under this chapter to obtain information from any person, and to require any person to conduct tests, keep and produce records, and make reports respecting research or other activities conducted by such person as necessary to carry out this subsection.

(6) Authorization

Of the funds authorized to be appropriated to the Administrator by this chapter, such amounts as are required shall be available to carry out this subsection.

(7) Guidelines for carcinogenic risk assessment

The Administrator shall consider, but need not adopt, the recommendations contained in the report of the National Academy of Sciences prepared pursuant to this subsection and the views of the Science Advisory Board, with respect to such report. Prior to the promulgation of any standard under subsection (f) of this section, and after notice and opportunity for comment, the Administrator shall publish revised Guidelines for Carcinogenic Risk Assessment or a detailed explanation of the reasons that any recommendations contained in the report of the National Academy of Sciences will not be implemented. The publication of such revised Guidelines shall be a final Agency action for purposes of [section 7607](#) of this title.

(p) Mickey Leland National Urban Air Toxics Research Center

(1) Establishment

The Administrator shall oversee the establishment of a National Urban Air Toxics Research Center, to be located at a university, a hospital, or other facility capable of undertaking and maintaining similar research capabilities in the areas

of epidemiology, oncology, toxicology, pulmonary medicine, pathology, and biostatistics. The center shall be known as the Mickey Leland National Urban Air Toxics Research Center. The geographic site of the National Urban Air Toxics Research Center should be further directed to Harris County, Texas, in order to take full advantage of the well developed scientific community presence on-site at the Texas Medical Center as well as the extensive data previously compiled for the comprehensive monitoring system currently in place.

(2) Board of Directors

The National Urban Air Toxics Research Center shall be governed by a Board of Directors to be comprised of 9 members, the appointment of which shall be allocated pro rata among the Speaker of the House, the Majority Leader of the Senate and the President. The members of the Board of Directors shall be selected based on their respective academic and professional backgrounds and expertise in matters relating to public health, environmental pollution and industrial hygiene. The duties of the Board of Directors shall be to determine policy and research guidelines, submit views from center sponsors and the public and issue periodic reports of center findings and activities.

(3) Scientific Advisory Panel

The Board of Directors shall be advised by a Scientific Advisory Panel, the 13 members of which shall be appointed by the Board, and to include eminent members of the scientific and medical communities. The Panel membership may include scientists with relevant experience from the National Institute of Environmental Health Sciences, the Center for Disease Control, the Environmental Protection Agency, the National Cancer Institute, and others, and the Panel shall conduct peer review and evaluate research results. The Panel shall assist the Board in developing the research agenda, reviewing proposals and applications, and advise on the awarding of research grants.

(4) Funding

The center shall be established and funded with both Federal and private source funds.

(q) Savings provision

(1) Standards previously promulgated

Any standard under this section in effect before the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990] shall remain in force and effect after such date unless modified as provided in this section before the date of enactment of such Amendments or under such Amendments. Except as provided in paragraph (4), any standard under this section which has been promulgated, but has not taken effect, before such date shall not be affected by such Amendments unless modified as provided in this section before such date or under such Amendments. Each such standard shall be reviewed and, if appropriate, revised, to comply with the requirements of subsection (d) of this section within 10 years after the date of enactment of the Clean Air Act Amendments of 1990. If a timely petition for review of any such standard under [section 7607](#) of this title is pending on such date of enactment, the standard shall be upheld if it complies with this section as in effect before that date. If any such standard is remanded to the Administrator, the Administrator may in the Administrator's discretion apply either the requirements of this section, or those of this section as in effect before the date of enactment of the Clean Air Act Amendments of 1990.

(2) Special rule

Notwithstanding paragraph (1), no standard shall be established under this section, as amended by the Clean Air Act Amendments of 1990, for radionuclide emissions from (A) elemental phosphorous plants, (B) grate calcination elemental phosphorous plants, (C) phosphogypsum stacks, or (D) any subcategory of the foregoing. This section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990 [November 15, 1990], shall remain in effect for radionuclide emissions from such plants and stacks.

(3) Other categories

Notwithstanding paragraph (1), this section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990], shall remain in effect for radionuclide emissions from non-Department of Energy Federal facilities that are not licensed by the Nuclear Regulatory Commission, coal-fired utility and industrial boilers, underground uranium mines, surface uranium mines, and disposal of uranium mill tailings piles, unless the Administrator, in the Administrator's discretion, applies the requirements of this section as modified by the Clean Air Act Amendments of 1990 to such sources of radionuclides.

(4) Medical facilities

Notwithstanding paragraph (1), no standard promulgated under this section prior to November 15, 1990, with respect to medical research or treatment facilities shall take effect for two years following November 15, 1990, unless the Administrator makes a determination pursuant to a rulemaking under subsection (d)(9) of this section. If the Administrator determines that the regulatory program established by the Nuclear Regulatory Commission for such facilities does not provide an ample margin of safety to protect public health, the requirements of this section shall fully apply to such facilities. If the Administrator determines that such regulatory program does provide an ample margin of safety to protect the public health, the Administrator is not required to promulgate a standard under this section for such facilities, as provided in subsection (d)(9) of this section.

(r) Prevention of accidental releases

(1) Purpose and general duty

It shall be the objective of the regulations and programs authorized under this subsection to prevent the accidental release and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous substance. The owners and operators of stationary sources producing, processing, handling or storing such substances have a general duty in the same manner and to the same extent as [section 654 of Title 29](#) to identify hazards which may result from such releases using appropriate hazard assessment techniques, to design and maintain a safe facility taking such steps as are necessary to prevent releases, and to minimize the consequences of accidental releases which do occur. For purposes of this paragraph, the provisions of [section 7604](#) of this title shall not be available to any person or otherwise be construed to be applicable to this paragraph. Nothing in this section shall be interpreted, construed, implied or applied to create any liability or basis for suit for compensation for bodily injury or any other injury or property damages to any person which may result from accidental releases of such substances.

(2) Definitions

(A) The term “accidental release” means an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

(B) The term “regulated substance” means a substance listed under paragraph (3).

(C) The term “stationary source” means any buildings, structures, equipment, installations or substance emitting stationary activities (i) which belong to the same industrial group, (ii) which are located on one or more contiguous properties, (iii) which are under the control of the same person (or persons under common control), and (iv) from which an accidental release may occur.

(D) The term “retail facility” means a stationary source at which more than one-half of the income is obtained from direct sales to end users or at which more than one-half of the fuel sold, by volume, is sold through a cylinder exchange program.

(3) List of substances

The Administrator shall promulgate not later than 24 months after November 15, 1990, an initial list of 100 substances which, in the case of an accidental release, are known to cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment. For purposes of promulgating such list, the Administrator shall use, but is not limited to, the list of extremely hazardous substances published under the Emergency Planning and Community Right-to-Know Act of 1986 [42 U.S.C.A. § 11001 et seq.], with such modifications as the Administrator deems appropriate. The initial list shall include chlorine, anhydrous ammonia, methyl chloride, ethylene oxide, vinyl chloride, methyl isocyanate, hydrogen cyanide, ammonia, hydrogen sulfide, toluene diisocyanate, phosgene, bromine, anhydrous hydrogen chloride, hydrogen fluoride, anhydrous sulfur dioxide, and sulfur trioxide. The initial list shall include at least 100 substances which pose the greatest risk of causing death, injury, or serious adverse effects to human health or the environment from accidental releases. Regulations establishing the list shall include an explanation of the basis for establishing the list. The list may be revised from time to time by the Administrator on the Administrator's own motion or by petition and shall be reviewed at least every 5 years. No air pollutant for which a national primary ambient air quality standard has been established shall be included on any such list. No substance, practice, process, or activity regulated under subchapter VI of this chapter shall be subject to regulations under this subsection. The Administrator shall establish procedures for the addition and deletion of substances from the list established under this paragraph consistent with those applicable to the list in subsection (b) of this section.

(4) Factors to be considered

In listing substances under paragraph (3), the Administrator--

(A) shall consider--

(i) the severity of any acute adverse health effects associated with accidental releases of the substance;

(ii) the likelihood of accidental releases of the substance; and

(iii) the potential magnitude of human exposure to accidental releases of the substance; and

(B) shall not list a flammable substance when used as a fuel or held for sale as a fuel at a retail facility under this subsection solely because of the explosive or flammable properties of the substance, unless a fire or explosion caused by the substance will result in acute adverse health effects from human exposure to the substance, including the unburned fuel or its combustion byproducts, other than those caused by the heat of the fire or impact of the explosion.

(5) Threshold quantity

At the time any substance is listed pursuant to paragraph (3), the Administrator shall establish by rule, a threshold quantity for the substance, taking into account the toxicity, reactivity, volatility, dispersibility, combustibility, or flammability of the substance and the amount of the substance which, as a result of an accidental release, is known to cause or may reasonably be anticipated to cause death, injury or serious adverse effects to human health for which the substance was listed. The Administrator is authorized to establish a greater threshold quantity for, or to exempt entirely, any substance that is a nutrient used in agriculture when held by a farmer.

(6) Chemical Safety Board

(A) There is hereby established an independent safety board to be known as the Chemical Safety and Hazard Investigation Board.

(B) The Board shall consist of 5 members, including a Chairperson, who shall be appointed by the President, by and with the advice and consent of the Senate. Members of the Board shall be appointed on the basis of technical qualification, professional standing, and demonstrated knowledge in the fields of accident reconstruction, safety engineering, human factors, toxicology, or air pollution regulation. The terms of office of members of the Board shall be 5 years. Any member of the Board, including the Chairperson, may be removed for inefficiency, neglect of duty, or malfeasance in office. The Chairperson shall be the Chief Executive Officer of the Board and shall exercise the executive and administrative functions of the Board.

(C) The Board shall--

(i) investigate (or cause to be investigated), determine and report to the public in writing the facts, conditions, and circumstances and the cause or probable cause of any accidental release resulting in a fatality, serious injury or substantial property damages;

(ii) issue periodic reports to the Congress, Federal, State and local agencies, including the Environmental Protection Agency and the Occupational Safety and Health Administration, concerned with the safety of chemical production, processing, handling and storage, and other interested persons recommending measures to reduce the likelihood or

the consequences of accidental releases and proposing corrective steps to make chemical production, processing, handling and storage as safe and free from risk of injury as is possible and may include in such reports proposed rules or orders which should be issued by the Administrator under the authority of this section or the Secretary of Labor under the Occupational Safety and Health Act [29 U.S.C.A. § 651 et seq.] to prevent or minimize the consequences of any release of substances that may cause death, injury or other serious adverse effects on human health or substantial property damage as the result of an accidental release; and

(iii) establish by regulation requirements binding on persons for reporting accidental releases into the ambient air subject to the Board's investigatory jurisdiction. Reporting releases to the National Response Center, in lieu of the Board directly, shall satisfy such regulations. The National Response Center shall promptly notify the Board of any releases which are within the Board's jurisdiction.

(D) The Board may utilize the expertise and experience of other agencies.

(E) The Board shall coordinate its activities with investigations and studies conducted by other agencies of the United States having a responsibility to protect public health and safety. The Board shall enter into a memorandum of understanding with the National Transportation Safety Board to assure coordination of functions and to limit duplication of activities which shall designate the National Transportation Safety Board as the lead agency for the investigation of releases which are transportation related. The Board shall not be authorized to investigate marine oil spills, which the National Transportation Safety Board is authorized to investigate. The Board shall enter into a memorandum of understanding with the Occupational Safety and Health Administration so as to limit duplication of activities. In no event shall the Board forego an investigation where an accidental release causes a fatality or serious injury among the general public, or had the potential to cause substantial property damage or a number of deaths or injuries among the general public.

(F) The Board is authorized to conduct research and studies with respect to the potential for accidental releases, whether or not an accidental release has occurred, where there is evidence which indicates the presence of a potential hazard or hazards. To the extent practicable, the Board shall conduct such studies in cooperation with other Federal agencies having emergency response authorities, State and local governmental agencies and associations and organizations from the industrial, commercial, and nonprofit sectors.

(G) No part of the conclusions, findings, or recommendations of the Board relating to any accidental release or the investigation thereof shall be admitted as evidence or used in any action or suit for damages arising out of any matter mentioned in such report.

(H) Not later than 18 months after November 15, 1990, the Board shall publish a report accompanied by recommendations to the Administrator on the use of hazard assessments in preventing the occurrence and minimizing the consequences of accidental releases of extremely hazardous substances. The recommendations shall include a list of extremely hazardous substances which are not regulated substances (including threshold quantities for such substances) and categories of stationary sources for which hazard assessments would be an appropriate measure to aid in the prevention of accidental releases and to minimize the consequences of those releases that do occur. The recommendations shall also include a description of the information and analysis which would be appropriate to include in any hazard as-

assessment. The Board shall also make recommendations with respect to the role of risk management plans as required by paragraph (8)(B) [FN4] in preventing accidental releases. The Board may from time to time review and revise its recommendations under this subparagraph.

(I) Whenever the Board submits a recommendation with respect to accidental releases to the Administrator, the Administrator shall respond to such recommendation formally and in writing not later than 180 days after receipt thereof. The response to the Board's recommendation by the Administrator shall indicate whether the Administrator will--

(i) initiate a rulemaking or issue such orders as are necessary to implement the recommendation in full or in part, pursuant to any timetable contained in the recommendation;

(ii) decline to initiate a rulemaking or issue orders as recommended.

Any determination by the Administrator not to implement a recommendation of the Board or to implement a recommendation only in part, including any variation from the schedule contained in the recommendation, shall be accompanied by a statement from the Administrator setting forth the reasons for such determination.

(J) The Board may make recommendations with respect to accidental releases to the Secretary of Labor. Whenever the Board submits such recommendation, the Secretary shall respond to such recommendation formally and in writing not later than 180 days after receipt thereof. The response to the Board's recommendation by the Administrator shall indicate whether the Secretary will--

(i) initiate a rulemaking or issue such orders as are necessary to implement the recommendation in full or in part, pursuant to any timetable contained in the recommendation;

(ii) decline to initiate a rulemaking or issue orders as recommended.

Any determination by the Secretary not to implement a recommendation or to implement a recommendation only in part, including any variation from the schedule contained in the recommendation, shall be accompanied by a statement from the Secretary setting forth the reasons for such determination.

(K) Within 2 years after November 15, 1990, the Board shall issue a report to the Administrator of the Environmental Protection Agency and to the Administrator of the Occupational Safety and Health Administration recommending the adoption of regulations for the preparation of risk management plans and general requirements for the prevention of accidental releases of regulated substances into the ambient air (including recommendations for listing substances under paragraph (3)) and for the mitigation of the potential adverse effect on human health or the environment as a result of accidental releases which should be applicable to any stationary source handling any regulated substance in more than threshold amounts. The Board may include proposed rules or orders which should be issued by the Administrator under authority of this subsection or by the Secretary of Labor under the Occupational Safety and Health Act [29 U.S.C.A. § 651 et seq.]. Any such recommendations shall be specific and shall identify the regulated substance or class

of regulated substances (or other substances) to which the recommendations apply. The Administrator shall consider such recommendations before promulgating regulations required by paragraph (7)(B).

(L) The Board, or upon authority of the Board, any member thereof, any administrative law judge employed by or assigned to the Board, or any officer or employee duly designated by the Board, may for the purpose of carrying out duties authorized by subparagraph (C)--

(i) hold such hearings, sit and act at such times and places, administer such oaths, and require by subpoena or otherwise attendance and testimony of such witnesses and the production of evidence and may require by order that any person engaged in the production, processing, handling, or storage of extremely hazardous substances submit written reports and responses to requests and questions within such time and in such form as the Board may require; and

(ii) upon presenting appropriate credentials and a written notice of inspection authority, enter any property where an accidental release causing a fatality, serious injury or substantial property damage has occurred and do all things therein necessary for a proper investigation pursuant to subparagraph (C) and inspect at reasonable times records, files, papers, processes, controls, and facilities and take such samples as are relevant to such investigation.

Whenever the Administrator or the Board conducts an inspection of a facility pursuant to this subsection, employees and their representatives shall have the same rights to participate in such inspections as provided in the Occupational Safety and Health Act [29 U.S.C.A. § 651 et seq.].

(M) In addition to that described in subparagraph (L), the Board may use any information gathering authority of the Administrator under this chapter, including the subpoena power provided in [section 7607\(a\)\(1\)](#) of this title.

(N) The Board is authorized to establish such procedural and administrative rules as are necessary to the exercise of its functions and duties. The Board is authorized without regard to [section 6101 of Title 41](#) to enter into contracts, leases, cooperative agreements or other transactions as may be necessary in the conduct of the duties and functions of the Board with any other agency, institution, or person.

(O) After the effective date of any reporting requirement promulgated pursuant to subparagraph (C)(iii) it shall be unlawful for any person to fail to report any release of any extremely hazardous substance as required by such subparagraph. The Administrator is authorized to enforce any regulation or requirements established by the Board pursuant to subparagraph (C)(iii) using the authorities of [sections 7413 and 7414](#) of this title. Any request for information from the owner or operator of a stationary source made by the Board or by the Administrator under this section shall be treated, for purposes of [sections 7413, 7414, 7416, 7420, 7603, 7604 and 7607](#) of this title and any other enforcement provisions of this chapter, as a request made by the Administrator under [section 7414](#) of this title and may be enforced by the Chairperson of the Board or by the Administrator as provided in such section.

(P) The Administrator shall provide to the Board such support and facilities as may be necessary for operation of the Board.

(Q) Consistent with subsection (G) [FN5] and [section 7414\(c\)](#) of this title any records, reports or information obtained by the Board shall be available to the Administrator, the Secretary of Labor, the Congress and the public, except that upon a showing satisfactory to the Board by any person that records, reports, or information, or particular part thereof (other than release or emissions data) to which the Board has access, if made public, is likely to cause substantial harm to the person's competitive position, the Board shall consider such record, report, or information or particular portion thereof confidential in accordance with [section 1905 of Title 18](#), except that such record, report, or information may be disclosed to other officers, employees, and authorized representatives of the United States concerned with carrying out this chapter or when relevant under any proceeding under this chapter. This subparagraph does not constitute authority to withhold records, reports, or information from the Congress.

(R) Whenever the Board submits or transmits any budget estimate, budget request, supplemental budget request, or other budget information, legislative recommendation, prepared testimony for congressional hearings, recommendation or study to the President, the Secretary of Labor, the Administrator, or the Director of the Office of Management and Budget, it shall concurrently transmit a copy thereof to the Congress. No report of the Board shall be subject to review by the Administrator or any Federal agency or to judicial review in any court. No officer or agency of the United States shall have authority to require the Board to submit its budget requests or estimates, legislative recommendations, prepared testimony, comments, recommendations or reports to any officer or agency of the United States for approval or review prior to the submission of such recommendations, testimony, comments or reports to the Congress. In the performance of their functions as established by this chapter, the members, officers and employees of the Board shall not be responsible to or subject to supervision or direction, in carrying out any duties under this subsection, of any officer or employee or agent of the Environmental Protection Agency, the Department of Labor or any other agency of the United States except that the President may remove any member, officer or employee of the Board for inefficiency, neglect of duty or malfeasance in office. Nothing in this section shall affect the application of Title 5 to officers or employees of the Board.

(S) The Board shall submit an annual report to the President and to the Congress which shall include, but not be limited to, information on accidental releases which have been investigated by or reported to the Board during the previous year, recommendations for legislative or administrative action which the Board has made, the actions which have been taken by the Administrator or the Secretary of Labor or the heads of other agencies to implement such recommendations, an identification of priorities for study and investigation in the succeeding year, progress in the development of risk-reduction technologies and the response to and implementation of significant research findings on chemical safety in the public and private sector.

(7) Accident prevention

(A) In order to prevent accidental releases of regulated substances, the Administrator is authorized to promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements. Regulations promulgated under this paragraph may make distinctions between various types, classes, and kinds of facilities, devices and systems taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present at any stationary source. Regulations promulgated pursuant to this subparagraph shall have an effective date, as determined by the Administrator, assuring compliance as expeditiously as practicable.

(B)(i) Within 3 years after November 15, 1990, the Administrator shall promulgate reasonable regulations and appropriate guidance to provide, to the greatest extent practicable, for the prevention and detection of accidental releases of regulated substances and for response to such releases by the owners or operators of the sources of such releases. The Administrator shall utilize the expertise of the Secretaries of Transportation and Labor in promulgating such regulations. As appropriate, such regulations shall cover the use, operation, repair, replacement, and maintenance of equipment to monitor, detect, inspect, and control such releases, including training of persons in the use and maintenance of such equipment and in the conduct of periodic inspections. The regulations shall include procedures and measures for emergency response after an accidental release of a regulated substance in order to protect human health and the environment. The regulations shall cover storage, as well as operations. The regulations shall, as appropriate, recognize differences in size, operations, processes, class and categories of sources and the voluntary actions of such sources to prevent such releases and respond to such releases. The regulations shall be applicable to a stationary source 3 years after the date of promulgation, or 3 years after the date on which a regulated substance present at the source in more than threshold amounts is first listed under paragraph (3), whichever is later.

(ii) The regulations under this subparagraph shall require the owner or operator of stationary sources at which a regulated substance is present in more than a threshold quantity to prepare and implement a risk management plan to detect and prevent or minimize accidental releases of such substances from the stationary source, and to provide a prompt emergency response to any such releases in order to protect human health and the environment. Such plan shall provide for compliance with the requirements of this subsection and shall also include each of the following:

(I) a hazard assessment to assess the potential effects of an accidental release of any regulated substance. This assessment shall include an estimate of potential release quantities and a determination of downwind effects, including potential exposures to affected populations. Such assessment shall include a previous release history of the past 5 years, including the size, concentration, and duration of releases, and shall include an evaluation of worst case accidental releases;

(II) a program for preventing accidental releases of regulated substances, including safety precautions and maintenance, monitoring and employee training measures to be used at the source; and

(III) a response program providing for specific actions to be taken in response to an accidental release of a regulated substance so as to protect human health and the environment, including procedures for informing the public and local agencies responsible for responding to accidental releases, emergency health care, and employee training measures.

At the time regulations are promulgated under this subparagraph, the Administrator shall promulgate guidelines to assist stationary sources in the preparation of risk management plans. The guidelines shall, to the extent practicable, include model risk management plans.

(iii) The owner or operator of each stationary source covered by clause (ii) shall register a risk management plan prepared under this subparagraph with the Administrator before the effective date of regulations under clause (i) in such form and manner as the Administrator shall, by rule, require. Plans prepared pursuant to this subparagraph shall also be submitted to the Chemical Safety and Hazard Investigation Board, to the State in which the stationary source is loc-

ated, and to any local agency or entity having responsibility for planning for or responding to accidental releases which may occur at such source, and shall be available to the public under [section 7414\(c\)](#) of this title. The Administrator shall establish, by rule, an auditing system to regularly review and, if necessary, require revision in risk management plans to assure that the plans comply with this subparagraph. Each such plan shall be updated periodically as required by the Administrator, by rule.

(C) Any regulations promulgated pursuant to this subsection shall to the maximum extent practicable, consistent with this subsection, be consistent with the recommendations and standards established by the American Society of Mechanical Engineers (ASME), the American National Standards Institute (ANSI) or the American Society of Testing Materials (ASTM). The Administrator shall take into consideration the concerns of small business in promulgating regulations under this subsection.

(D) In carrying out the authority of this paragraph, the Administrator shall consult with the Secretary of Labor and the Secretary of Transportation and shall coordinate any requirements under this paragraph with any requirements established for comparable purposes by the Occupational Safety and Health Administration or the Department of Transportation. Nothing in this subsection shall be interpreted, construed or applied to impose requirements affecting, or to grant the Administrator, the Chemical Safety and Hazard Investigation Board, or any other agency any authority to regulate (including requirements for hazard assessment), the accidental release of radionuclides arising from the construction and operation of facilities licensed by the Nuclear Regulatory Commission.

(E) After the effective date of any regulation or requirement imposed under this subsection, it shall be unlawful for any person to operate any stationary source subject to such regulation or requirement in violation of such regulation or requirement. Each regulation or requirement under this subsection shall for purposes of [sections 7413, 7414, 7416, 7420, 7604, and 7607](#) of this title and other enforcement provisions of this chapter, be treated as a standard in effect under subsection (d) of this section.

(F) Notwithstanding the provisions of subchapter V of this chapter or this section, no stationary source shall be required to apply for, or operate pursuant to, a permit issued under such subchapter solely because such source is subject to regulations or requirements under this subsection.

(G) In exercising any authority under this subsection, the Administrator shall not, for purposes of [section 653\(b\)\(1\) of Title 29](#), be deemed to be exercising statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.

(H) Public access to off-site consequence analysis information

(i) Definitions

In this subparagraph:

(I) Covered person

The term “covered person” means--

(aa) an officer or employee of the United States;

(bb) an officer or employee of an agent or contractor of the Federal Government;

(cc) an officer or employee of a State or local government;

(dd) an officer or employee of an agent or contractor of a State or local government;

(ee) an individual affiliated with an entity that has been given, by a State or local government, responsibility for preventing, planning for, or responding to accidental releases;

(ff) an officer or employee or an agent or contractor of an entity described in item (ee); and

(gg) a qualified researcher under clause (vii).

(II) Official use

The term “official use” means an action of a Federal, State, or local government agency or an entity referred to in subclause (I)(ee) intended to carry out a function relevant to preventing, planning for, or responding to accidental releases.

(III) Off-site consequence analysis information

The term “off-site consequence analysis information” means those portions of a risk management plan, excluding the executive summary of the plan, consisting of an evaluation of 1 or more worst-case release scenarios or alternative release scenarios, and any electronic data base created by the Administrator from those portions.

(IV) Risk management plan

The term “risk management plan” means a risk management plan submitted to the Administrator by an owner or operator of a stationary source under subparagraph (B)(iii).

(ii) Regulations

Not later than 1 year after the date of enactment of this subparagraph, the President shall--

(I) assess--

(aa) the increased risk of terrorist and other criminal activity associated with the posting of off-site consequence analysis information on the Internet; and

(bb) the incentives created by public disclosure of off-site consequence analysis information for reduction in the risk of accidental releases; and

(II) based on the assessment under subclause (I), promulgate regulations governing the distribution of off-site consequence analysis information in a manner that, in the opinion of the President, minimizes the likelihood of accidental releases and the risk described in subclause (I)(aa) and the likelihood of harm to public health and welfare, and--

(aa) allows access by any member of the public to paper copies of off-site consequence analysis information for a limited number of stationary sources located anywhere in the United States, without any geographical restriction;

(bb) allows other public access to off-site consequence analysis information as appropriate;

(cc) allows access for official use by a covered person described in any of items (cc) through (ff) of clause (i)(I) (referred to in this subclause as a 'State or local covered person') to off-site consequence analysis information relating to stationary sources located in the person's State;

(dd) allows a State or local covered person to provide, for official use, off-site consequence analysis information relating to stationary sources located in the person's State to a State or local covered person in a contiguous State; and

(ee) allows a State or local covered person to obtain for official use, by request to the Administrator, off-site consequence analysis information that is not available to the person under item (cc).

(iii) Availability under freedom of information act

(I) First year

Off-site consequence analysis information, and any ranking of stationary sources derived from the information, shall not be made available under [section 552 of Title 5](#), during the 1-year period beginning on the date of enactment of this subparagraph.

(II) After first year

If the regulations under clause (ii) are promulgated on or before the end of the period described in subclause (I), off-site consequence analysis information covered by the regulations, and any ranking of stationary sources derived from the information, shall not be made available under [section 552 of Title 5](#), after the end of that period.

(III) Applicability

Subclauses (I) and (II) apply to off-site consequence analysis information submitted to the Administrator before, on, or after the date of enactment of this subparagraph.

(iv) Availability of information during transition period

The Administrator shall make off-site consequence analysis information available to covered persons for official use in a manner that meets the requirements of items (cc)through (ee) of clause (ii)(II), and to the public in a form that does not make available any information concerning the identity or location of stationary sources, during the period--

(I) beginning on the date of enactment of this subparagraph; and

(II) ending on the earlier of the date of promulgation of the regulations under clause (ii) or the date that is 1 year after the date of enactment of this subparagraph.

(v) Prohibition on unauthorized disclosure of information by covered persons

(I) In general

Beginning on the date of enactment of this subparagraph, a covered person shall not disclose to the public off-site consequence analysis information in any form, or any statewide or national ranking of identified stationary sources derived from such information, except as authorized by this subparagraph (including the regulations promulgated under clause (ii)). After the end of the 1-year period beginning on the date of enactment of this subparagraph, if regulations have not been promulgated under clause (ii), the preceding sentence shall not apply.

(II) Criminal penalties

Notwithstanding [section 7413](#) of this title, a covered person that willfully violates a restriction or prohibition established by this subparagraph (including the regulations promulgated under clause (ii)) shall, upon conviction, be fined for an infraction under [section 3571 of Title 18](#), (but shall not be subject to imprisonment) for each unauthorized disclosure of off-site consequence analysis information, except that subsection (d) of such section 3571 shall not apply to a case in which the offense results in pecuniary loss unless the defendant knew that such loss would occur. The disclosure of off-site consequence analysis information for each specific stationary source shall be considered a separate offense. The total of all penalties that may be imposed on a single person or organization under this item shall not exceed \$1,000,000 for violations committed during any 1 calendar year.

(III) Applicability

If the owner or operator of a stationary source makes off-site consequence analysis information relating to that stationary source available to the public without restriction--

(aa) subclauses (I) and (II) shall not apply with respect to the information; and

(bb) the owner or operator shall notify the Administrator of the public availability of the information.

(IV) List

The Administrator shall maintain and make publicly available a list of all stationary sources that have provided notification under subclause (III)(bb).

(vi) Notice

The Administrator shall provide notice of the definition of official use as provided in clause (i)(III) and examples of actions that would and would not meet that definition, and notice of the restrictions on further dissemination and the penalties established by this Act to each covered person who receives off-site consequence analysis information under clause (iv) and each covered person who receives off-site consequence analysis information for an official use under the regulations promulgated under clause (ii).

(vii) Qualified researchers**(I) In general**

Not later than 180 days after the date of enactment of this subparagraph, the Administrator, in consultation with the Attorney General, shall develop and implement a system for providing off-site consequence analysis information, including facility identification, to any qualified researcher, including a qualified researcher from industry or any public interest group.

(II) Limitation on dissemination

The system shall not allow the researcher to disseminate, or make available on the Internet, the off-site consequence analysis information, or any portion of the off-site consequence analysis information, received under this clause.

(viii) Read-only information technology system

In consultation with the Attorney General and the heads of other appropriate Federal agencies, the Administrator

shall establish an information technology system that provides for the availability to the public of off-site consequence analysis information by means of a central data base under the control of the Federal Government that contains information that users may read, but that provides no means by which an electronic or mechanical copy of the information may be made.

(ix) Voluntary industry accident prevention standards

The Environmental Protection Agency, the Department of Justice, and other appropriate agencies may provide technical assistance to owners and operators of stationary sources and participate in the development of voluntary industry standards that will help achieve the objectives set forth in paragraph (1).

(x) Effect on State or local law

(I) In general

Subject to subclause (II), this subparagraph (including the regulations promulgated under this subparagraph) shall supersede any provision of State or local law that is inconsistent with this subparagraph (including the regulations).

(II) Availability of information under State law

Nothing in this subparagraph precludes a State from making available data on the off-site consequences of chemical releases collected in accordance with State law.

(xi) Report

(I) In general

Not later than 3 years after the date of enactment of this subparagraph, the Attorney General, in consultation with appropriate State, local, and Federal Government agencies, affected industry, and the public, shall submit to Congress a report that describes the extent to which regulations promulgated under this paragraph have resulted in actions, including the design and maintenance of safe facilities, that are effective in detecting, preventing, and minimizing the consequences of releases of regulated substances that may be caused by criminal activity. As part of this report, the Attorney General, using available data to the extent possible, and a sampling of covered stationary sources selected at the discretion of the Attorney General, and in consultation with appropriate State, local, and Federal governmental agencies, affected industry, and the public, shall review the vulnerability of covered stationary sources to criminal and terrorist activity, current industry practices regarding site security, and security of transportation of regulated substances. The Attorney General shall submit this report, containing the results of the review, together with recommendations, if any, for reducing vulnerability of covered stationary sources to criminal and terrorist activity, to the Committee on Commerce of the United States House of Representatives and the Committee on Environment and Public Works of the United States Senate and other relevant committees of Congress.

(II) Interim report

Not later than 12 months after the date of enactment of this subparagraph, the Attorney General shall submit to the Committee on Commerce of the United States House of Representatives and the Committee on Environment and Public Works of the United States Senate, and other relevant committees of Congress, an interim report that includes, at a minimum--

(aa) the preliminary findings under subclause (I);

(bb) the methods used to develop the findings; and

(cc) an explanation of the activities expected to occur that could cause the findings of the report under subclause (I) to be different than the preliminary findings.

(III) Availability of information

Information that is developed by the Attorney General or requested by the Attorney General and received from a covered stationary source for the purpose of conducting the review under subclauses(I) and (II) shall be exempt from disclosure under [section 552 of Title 5](#), if such information would pose a threat to national security.

(xii) Scope

This subparagraph--

(I) applies only to covered persons; and

(II) does not restrict the dissemination of off-site consequence analysis information by any covered person in any manner or form except in the form of a risk management plan or an electronic data base created by the Administrator from off-site consequence analysis information.

(xiii) Authorization of appropriations

There are authorized to be appropriated to the Administrator and the Attorney General such sums as are necessary to carry out this subparagraph (including the regulations promulgated under clause (ii)), to remain available until expended.

(8) Research on hazard assessments

The Administrator may collect and publish information on accident scenarios and consequences covering a range of possible events for substances listed under paragraph (3). The Administrator shall establish a program of long-term re-

search to develop and disseminate information on methods and techniques for hazard assessment which may be useful in improving and validating the procedures employed in the preparation of hazard assessments under this subsection.

(9) Order authority

(A) In addition to any other action taken, when the Administrator determines that there may be an imminent and substantial endangerment to the human health or welfare or the environment because of an actual or threatened accidental release of a regulated substance, the Administrator may secure such relief as may be necessary to abate such danger or threat, and the district court of the United States in the district in which the threat occurs shall have jurisdiction to grant such relief as the public interest and the equities of the case may require. The Administrator may also, after notice to the State in which the stationary source is located, take other action under this paragraph including, but not limited to, issuing such orders as may be necessary to protect human health. The Administrator shall take action under [section 7603](#) of this title rather than this paragraph whenever the authority of such section is adequate to protect human health and the environment.

(B) Orders issued pursuant to this paragraph may be enforced in an action brought in the appropriate United States district court as if the order were issued under [section 7603](#) of this title.

(C) Within 180 days after November 15, 1990, the Administrator shall publish guidance for using the order authorities established by this paragraph. Such guidance shall provide for the coordinated use of the authorities of this paragraph with other emergency powers authorized by [section 9606](#) of this title, sections 311(c), 308, 309 and 504(a) of the Federal Water Pollution Control Act [33 U.S.C.A. §§ 1321(c), 1318, 1319 and 1364(a)], sections 3007, 3008, 3013, and 7003 of the Solid Waste Disposal Act [42 U.S.C.A. §§ 6927, 6928, 6934, and 6973], sections 1445 and 1431 of the Safe Drinking Water Act [42 U.S.C.A. §§ 300j-4 and 300i], sections 5 and 7 of the Toxic Substances Control Act [15 U.S.C.A. §§ 2604, 2606], and [sections 7413, 7414, and 7603](#) of this title.

(10) Presidential review

The President shall conduct a review of release prevention, mitigation and response authorities of the various Federal agencies and shall clarify and coordinate agency responsibilities to assure the most effective and efficient implementation of such authorities and to identify any deficiencies in authority or resources which may exist. The President may utilize the resources and solicit the recommendations of the Chemical Safety and Hazard Investigation Board in conducting such review. At the conclusion of such review, but not later than 24 months after November 15, 1990, the President shall transmit a message to the Congress on the release prevention, mitigation and response activities of the Federal Government making such recommendations for change in law as the President may deem appropriate. Nothing in this paragraph shall be interpreted, construed or applied to authorize the President to modify or reassign release prevention, mitigation or response authorities otherwise established by law.

(11) State authority

Nothing in this subsection shall preclude, deny or limit any right of a State or political subdivision thereof to adopt or enforce any regulation, requirement, limitation or standard (including any procedural requirement) that is more stringent than a regulation, requirement, limitation or standard in effect under this subsection or that applies to a substance

not subject to this subsection.

(s) Periodic report

Not later than January 15, 1993 and every 3 years thereafter, the Administrator shall prepare and transmit to the Congress a comprehensive report on the measures taken by the Agency and by the States to implement the provisions of this section. The Administrator shall maintain a database on pollutants and sources subject to the provisions of this section and shall include aggregate information from the database in each annual report. The report shall include, but not be limited to--

- (1) a status report on standard-setting under subsections (d) and (f) of this section;
- (2) information with respect to compliance with such standards including the costs of compliance experienced by sources in various categories and subcategories;
- (3) development and implementation of the national urban air toxics program; and
- (4) recommendations of the Chemical Safety and Hazard Investigation Board with respect to the prevention and mitigation of accidental releases.

CREDIT(S)

(July 14, 1955, c. 360, Title I, § 112, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1685; amended Aug. 7, 1977, Pub.L. 95-95, Title I, §§ 109(d)(2), 110, Title IV, § 401(c), 91 Stat. 701, 703, 791; Nov. 9, 1978, Pub.L. 95-623, § 13(b), 92 Stat. 3458; Nov. 15, 1990, Pub.L. 101-549, Title III, § 301, 104 Stat. 2531; Dec. 4, 1991, Pub.L. 102-187, 105 Stat. 1285; Nov. 10, 1998, Pub.L. 105-362, Title IV, § 402(b), 112 Stat. 3283; Aug. 5, 1999, Pub.L. 106-40, §§ 2, 3(a), 113 Stat. 207.)

[FN1] So in original. Probably should be “effects”.

[FN2] So in original.

[FN3] So in original. Probably should be “section”.

[FN4] So in original. Probably should be paragraph “(7)(B)”.

[FN5] So in original. Probably should be “subparagraph”.

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**Effective:[See Text Amendments]**United States Code Annotated [Currentness](#)

Title 42. The Public Health and Welfare

[⌕] [Chapter 85](#). Air Pollution Prevention and Control ([Refs & Annos](#)) [⌕] [Subchapter III](#). General Provisions →→ **§ 7604. Citizen suits**

(a) Authority to bring civil action; jurisdiction

Except as provided in subsection (b) of this section, any person may commence a civil action on his own behalf-

(1) against any person (including (i) the United States, and (ii) any other governmental instrumentality or agency to the extent permitted by the Eleventh Amendment to the Constitution) who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of (A) an emission standard or limitation under this chapter or (B) an order issued by the Administrator or a State with respect to such a standard or limitation,

(2) against the Administrator where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator, or

(3) against any person who proposes to construct or constructs any new or modified major emitting facility without a permit required under part C of subchapter I of this chapter (relating to significant deterioration of air quality) or part D of subchapter I of this chapter (relating to nonattainment) or who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of any condition of such permit.

The district courts shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to enforce such an emission standard or limitation, or such an order, or to order the Administrator to perform such act or duty, as the case may be, and to apply any appropriate civil penalties (except for actions under paragraph (2)). The district courts of the United States shall have jurisdiction to compel (consistent with paragraph (2) of this subsection) agency action unreasonably delayed, except that an action to compel agency action referred to in [section 7607\(b\)](#) of this title which is unreasonably delayed may only be filed in a United States District Court within the circuit in which such action would be reviewable under [section 7607\(b\)](#) of this title. In any such action for unreasonable delay, notice to the entities referred to in subsection (b)(1)(A) of this section shall be provided 180 days before commencing such action.

(b) Notice

No action may be commenced--

(1) under subsection (a)(1) of this section--

(A) prior to 60 days after the plaintiff has given notice of the violation (i) to the Administrator, (ii) to the State in which the violation occurs, and (iii) to any alleged violator of the standard, limitation, or order, or

(B) if the Administrator or State has commenced and is diligently prosecuting a civil action in a court of the United States or a State to require compliance with the standard, limitation, or order, but in any such action in a court of the United States any person may intervene as a matter of right.

(2) under subsection (a)(2) of this section prior to 60 days after the plaintiff has given notice of such action to the Administrator,

except that such action may be brought immediately after such notification in the case of an action under this section respecting a violation of [section 7412\(i\)\(3\)\(A\)](#) or [\(f\)\(4\)](#) of this title or an order issued by the Administrator pursuant to [section 7413\(a\)](#) of this title. Notice under this subsection shall be given in such manner as the Administrator shall prescribe by regulation.

(c) Venue; intervention by Administrator; service of complaint; consent judgment

(1) Any action respecting a violation by a stationary source of an emission standard or limitation or an order respecting such standard or limitation may be brought only in the judicial district in which such source is located.

(2) In any action under this section, the Administrator, if not a party, may intervene as a matter of right at any time in the proceeding. A judgment in an action under this section to which the United States is not a party shall not, however, have any binding effect upon the United States.

(3) Whenever any action is brought under this section the plaintiff shall serve a copy of the complaint on the Attorney General of the United States and on the Administrator. No consent judgment shall be entered in an action brought under this section in which the United States is not a party prior to 45 days following the receipt of a copy of the proposed consent judgment by the Attorney General and the Administrator during which time the Government may submit its comments on the proposed consent judgment to the court and parties or may intervene as a matter of right.

(d) Award of costs; security

The court, in issuing any final order in any action brought pursuant to subsection (a) of this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any party, whenever the court determines such award is appropriate. The court may, if a temporary restraining order or preliminary injunction is sought, require the filing of a bond or equivalent security in accordance with the Federal Rules of Civil Procedure.

(e) Nonrestriction of other rights

Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any emission standard or limitation or to seek any other relief (including relief against the Administrator or a State agency). Nothing in this section or in any other law of the United States shall be construed to prohibit, exclude, or restrict any State, local, or interstate authority from--

- (1) bringing any enforcement action or obtaining any judicial remedy or sanction in any State or local court, or
- (2) bringing any administrative enforcement action or obtaining any administrative remedy or sanction in any State or local administrative agency, department or instrumentality,

against the United States, any department, agency, or instrumentality thereof, or any officer, agent, or employee thereof under State or local law respecting control and abatement of air pollution. For provisions requiring compliance by the United States, departments, agencies, instrumentalities, officers, agents, and employees in the same manner as nongovernmental entities, see [section 7418](#) of this title.

(f) “Emission standard or limitation under this chapter” defined

For purposes of this section, the term “emission standard or limitation under this chapter” means--

- (1) a schedule or timetable of compliance, emission limitation, standard of performance or emission standard,
- (2) a control or prohibition respecting a motor vehicle fuel or fuel additive, or [\[FN1\]](#)
- (3) any condition or requirement of a permit under part C of subchapter I of this chapter (relating to significant deterioration of air quality) or part D of subchapter I of this chapter (relating to nonattainment), [\[FN2\]](#)[section 7419](#) of this title (relating to primary nonferrous smelter orders), any condition or requirement under an applicable implementation plan relating to transportation control measures, air quality maintenance plans, vehicle inspection and maintenance programs or vapor recovery requirements, [section 7545\(e\)](#) and (f) of this title (relating to fuels and fuel additives), [section 7491](#) of this title (relating to visibility protection), any condition or requirement under subchapter VI of this chapter (relating to ozone protection), or any requirement under [section 7411](#) or [7412](#) of this title (without regard to whether such requirement is expressed as an emission standard or otherwise); [\[FN3\]](#) or

(4) any other standard, limitation, or schedule established under any permit issued pursuant to subchapter V of this chapter or under any applicable State implementation plan approved by the Administrator, any permit term or condition, and any requirement to obtain a permit as a condition of operations. [FN4]

which is in effect under this chapter (including a requirement applicable by reason of [section 7418](#) of this title) or under an applicable implementation plan.

(g) Penalty fund

(1) Penalties received under subsection (a) of this section shall be deposited in a special fund in the United States Treasury for licensing and other services. Amounts in such fund are authorized to be appropriated and shall remain available until expended, for use by the Administrator to finance air compliance and enforcement activities. The Administrator shall annually report to the Congress about the sums deposited into the fund, the sources thereof, and the actual and proposed uses thereof.

(2) Notwithstanding paragraph (1) the court in any action under this subsection to apply civil penalties shall have discretion to order that such civil penalties, in lieu of being deposited in the fund referred to in paragraph (1), be used in beneficial mitigation projects which are consistent with this chapter and enhance the public health or the environment. The court shall obtain the view of the Administrator in exercising such discretion and selecting any such projects. The amount of any such payment in any such action shall not exceed \$100,000.

CREDIT(S)

(July 14, 1955, c. 360, Title III, § 304, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1706; amended Aug. 7, 1977, [Pub.L. 95-95, Title III, § 303\(a\)-\(c\)](#), 91 Stat. 771, 772; Nov. 16, 1977, [Pub.L. 95-190, § 14\(a\)\(77\)](#), (78), 91 Stat. 1404; Nov. 15, 1990, [Pub.L. 101-549, Title III, § 302\(f\), Title VII, § 707\(a\)-\(g\)](#), 104 Stat. 2574, 2682, 2683.)

[FN1] So in original. The word “or” probably should not appear.

[FN2] So in original.

[FN3] So in original. The semicolon probably should be comma.

[FN4] So in original. The period probably should be a comma.

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Title 42. The Public Health and Welfare

[Ⓢ] [Chapter 85](#). Air Pollution Prevention and Control ([Refs & Annos](#)) [Ⓢ] [Subchapter III](#). General Provisions →→ **§ 7607. Administrative proceedings and judicial review**

(a) Administrative subpoenas; confidentiality; witnesses

In connection with any determination under [section 7410\(f\)](#) of this title, or for purposes of obtaining information under [section 7521\(b\)\(4\)](#) or [7545\(c\)\(3\)](#) of this title, any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the [\[FN1\]](#) chapter (including but not limited to [section 7413](#), [section 7414](#), [section 7420](#), [section 7429](#), [section 7477](#), [section 7524](#), [section 7525](#), [section 7542](#), [section 7603](#), or [section 7606](#) of this title), [\[FN2\]](#) the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of [section 1905 of Title 18](#), except that such paper, book, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, to persons carrying out the National Academy of Sciences' study and investigation provided for in [section 7521\(c\)](#) of this title, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person under this subparagraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under [section 7412](#) of this title, any standard of performance or requirement under [section 7411](#) of this title, [\[FN2\]](#) any standard under [section 7521](#) of this title (other than a standard required to be prescribed under [section 7521\(b\)\(1\)](#) of this title), any determination under [section 7521\(b\)\(5\)](#) of this title, any control or prohibition under [section 7545](#) of this title, any standard under [section 7571](#) of this title, any rule issued under [section 7413](#), [7419](#), or under [section 7420](#) of this title, or any

other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under [section 7410](#) of this title or [section 7411\(d\)](#) of this title, any order under [section 7411\(j\)](#) of this title, under [section 7412](#) of this title,, [FN2] under [section 7419](#) of this title, or under [section 7420](#) of this title, or his action under [section 1857c-10\(c\)\(2\)\(A\), \(B\), or \(C\)](#) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under [section 7414\(a\)\(3\)](#) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

(c) Additional evidence

In any judicial proceeding in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as to [FN3] the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(d) Rulemaking

(1) This subsection applies to--

(A) the promulgation or revision of any national ambient air quality standard under [section 7409](#) of this title,

(B) the promulgation or revision of an implementation plan by the Administrator under [section 7410\(c\)](#) of this title,

(C) the promulgation or revision of any standard of performance under [section 7411](#) of this title, or emission standard or limitation under [section 7412\(d\)](#) of this title, any standard under [section 7412\(f\)](#) of this title, or any regulation under [section 7412\(g\)\(1\)\(D\) and \(F\)](#) of this title, or any regulation under [section 7412\(m\)](#) or (n) of this title,

(D) the promulgation of any requirement for solid waste combustion under [section 7429](#) of this title,

(E) the promulgation or revision of any regulation pertaining to any fuel or fuel additive under [section 7545](#) of this title,

(F) the promulgation or revision of any aircraft emission standard under [section 7571](#) of this title,

(G) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to control of acid deposition),

(H) promulgation or revision of regulations pertaining to primary nonferrous smelter orders under [section 7419](#) of this title (but not including the granting or denying of any such order),

(I) promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection),

(J) promulgation or revision of regulations under part C of subchapter I of this chapter (relating to prevention of significant deterioration of air quality and protection of visibility),

(K) promulgation or revision of regulations under [section 7521](#) of this title and test procedures for new motor vehicles or engines under [section 7525](#) of this title, and the revision of a standard under [section 7521\(a\)\(3\)](#) of this title,

(L) promulgation or revision of regulations for noncompliance penalties under [section 7420](#) of this title,

(M) promulgation or revision of any regulations promulgated under [section 7541](#) of this title (relating to warranties and compliance by vehicles in actual use),

(N) action of the Administrator under [section 7426](#) of this title (relating to interstate pollution abatement),

(O) the promulgation or revision of any regulation pertaining to consumer and commercial products under [section 7511b\(e\)](#) of this title,

(P) the promulgation or revision of any regulation pertaining to field citations under [section 7413\(d\)\(3\)](#) of this title,

(Q) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel vehicle, clean-fuel fleet, and clean fuel programs under part C of subchapter II of this chapter,

(R) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under [section 7547](#) of this title,

(S) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under [section 7552](#) of this title,

(T) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to acid deposition),

(U) the promulgation or revision of any regulation under [section 7511b\(f\)](#) of this title pertaining to marine vessels, and

(V) such other actions as the Administrator may determine.

The provisions of [section 553](#) through [557](#) and [section 706 of Title 5](#) shall not, except as expressly provided in this subsection, apply to actions to which this subsection applies. This subsection shall not apply in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of subsection 553(b) of Title 5.

(2) Not later than the date of proposal of any action to which this subsection applies, the Administrator shall establish a rulemaking docket for such action (hereinafter in this subsection referred to as a “rule”). Whenever a rule applies only within a particular State, a second (identical) docket shall be simultaneously established in the appropriate regional office of the Environmental Protection Agency.

(3) In the case of any rule to which this subsection applies, notice of proposed rulemaking shall be published in the Federal Register, as provided under [section 553\(b\) of Title 5](#), shall be accompanied by a statement of its basis and purpose and shall specify the period available for public comment (hereinafter referred to as the “comment period”). The notice of proposed rulemaking shall also state the docket number, the location or locations of the docket, and the times it will be open to public inspection. The statement of basis and purpose shall

include a summary of--

- (A) the factual data on which the proposed rule is based;
- (B) the methodology used in obtaining the data and in analyzing the data; and
- (C) the major legal interpretations and policy considerations underlying the proposed rule.

The statement shall also set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by the Scientific Review Committee established under [section 7409\(d\)](#) of this title and the National Academy of Sciences, and, if the proposal differs in any important respect from any of these recommendations, an explanation of the reasons for such differences. All data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.

(4)(A) The rulemaking docket required under paragraph (2) shall be open for inspection by the public at reasonable times specified in the notice of proposed rulemaking. Any person may copy documents contained in the docket. The Administrator shall provide copying facilities which may be used at the expense of the person seeking copies, but the Administrator may waive or reduce such expenses in such instances as the public interest requires. Any person may request copies by mail if the person pays the expenses, including personnel costs to do the copying.

(B)(i) Promptly upon receipt by the agency, all written comments and documentary information on the proposed rule received from any person for inclusion in the docket during the comment period shall be placed in the docket. The transcript of public hearings, if any, on the proposed rule shall also be included in the docket promptly upon receipt from the person who transcribed such hearings. All documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking shall be placed in the docket as soon as possible after their availability.

(ii) The drafts of proposed rules submitted by the Administrator to the Office of Management and Budget for any interagency review process prior to proposal of any such rule, all documents accompanying such drafts, and all written comments thereon by other agencies and all written responses to such written comments by the Administrator shall be placed in the docket no later than the date of proposal of the rule. The drafts of the final rule submitted for such review process prior to promulgation and all such written comments thereon, all documents accompanying such drafts, and written responses thereto shall be placed in the docket no later than the date of promulgation.

(5) In promulgating a rule to which this subsection applies (i) the Administrator shall allow any person to submit written comments, data, or documentary information; (ii) the Administrator shall give interested persons an opportunity for the oral presentation of data, views, or arguments, in addition to an opportunity to make written submissions; (iii) a transcript shall be kept of any oral presentation; and (iv) the Administrator shall keep the re-

cord of such proceeding open for thirty days after completion of the proceeding to provide an opportunity for submission of rebuttal and supplementary information.

(6)(A) The promulgated rule shall be accompanied by (i) a statement of basis and purpose like that referred to in paragraph (3) with respect to a proposed rule and (ii) an explanation of the reasons for any major changes in the promulgated rule from the proposed rule.

(B) The promulgated rule shall also be accompanied by a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period.

(C) The promulgated rule may not be based (in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation.

(7)(A) The record for judicial review shall consist exclusively of the material referred to in paragraph (3), clause (i) of paragraph (4)(B), and subparagraphs (A) and (B) of paragraph (6).

(B) Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

(8) The sole forum for challenging procedural determinations made by the Administrator under this subsection shall be in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section) at the time of the substantive review of the rule. No interlocutory appeals shall be permitted with respect to such procedural determinations. In reviewing alleged procedural errors, the court may invalidate the rule only if the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be--

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or

(D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.

(10) Each statutory deadline for promulgation of rules to which this subsection applies which requires promulgation less than six months after date of proposal may be extended to not more than six months after date of proposal by the Administrator upon a determination that such extension is necessary to afford the public, and the agency, adequate opportunity to carry out the purposes of this subsection.

(11) The requirements of this subsection shall take effect with respect to any rule the proposal of which occurs after ninety days after August 7, 1977.

(e) Other methods of judicial review not authorized

Nothing in this chapter shall be construed to authorize judicial review of regulations or orders of the Administrator under this chapter, except as provided in this section.

(f) Costs

In any judicial proceeding under this section, the court may award costs of litigation (including reasonable attorney and expert witness fees) whenever it determines that such award is appropriate.

(g) Stay, injunction, or similar relief in proceedings relating to noncompliance penalties

In any action respecting the promulgation of regulations under [section 7420](#) of this title or the administration or enforcement of [section 7420](#) of this title no court shall grant any stay, injunctive, or similar relief before final judgment by such court in such action.

(h) Public participation

It is the intent of Congress that, consistent with the policy of subchapter II of chapter 5 of Title 5, the Administrator in promulgating any regulation under this chapter, including a regulation subject to a deadline, shall ensure a reasonable period for public participation of at least 30 days, except as otherwise expressly provided in section [\[FN4\]](#) 7407(d), 7502(a), 7511(a) and (b), and 7512(a) and (b) of this title.

CREDIT(S)

(July 14, 1955, c. 360, Title III, § 307, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1707; amended Nov. 18, 1971, Pub.L. 92-157, Title III, § 302(a), 85 Stat. 464; June 22, 1974, [Pub.L. 93-319, § 6\(c\)](#), [88 Stat. 259](#); Aug. 7, 1977, [Pub.L. 95-95, Title III, §§ 303\(d\)](#), 305(a), (c), (f)-(h), 91 Stat. 772, 776, 777; Nov. 16, 1977, [Pub.L. 95-190, § 14\(a\)\(79\)](#), (80), 91 Stat. 1404; Nov. 15, 1990, [Pub.L. 101-549, Title I, §§ 108\(p\)](#), 110(5), Title III, § 302(g), (h), Title VII, §§ 702(c), 703, 706, 707(h), 710(b), 104 Stat. 2469, 2470, 2574, 2681-2684.)

[\[FN1\]](#) So in original. Probably should be “this”.

[\[FN2\]](#) So in original.

[\[FN3\]](#) So in original. The word “to” probably should not appear.

[\[FN4\]](#) So in original. Probably should be “sections”.

Current through P.L. 112-207 (excluding P.L. 112-199 and 112-206) approved 12-7-12

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C**Effective:[See Text Amendments]**United States Code Annotated [Currentness](#)

Title 42. The Public Health and Welfare

[⌕] [Chapter 85](#). Air Pollution Prevention and Control ([Refs & Annos](#)) [⌕] [Subchapter V](#). Permits ([Refs & Annos](#)) →→ **§ 7661c. Permit requirements and conditions****(a) Conditions**

Each permit issued under this subchapter shall include enforceable emission limitations and standards, a schedule of compliance, a requirement that the permittee submit to the permitting authority, no less often than every 6 months, the results of any required monitoring, and such other conditions as are necessary to assure compliance with applicable requirements of this chapter, including the requirements of the applicable implementation plan.

(b) Monitoring and analysis

The Administrator may by rule prescribe procedures and methods for determining compliance and for monitoring and analysis of pollutants regulated under this chapter, but continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance. Nothing in this subsection shall be construed to affect any continuous emissions monitoring requirement of subchapter IV-A of this chapter, or where required elsewhere in this chapter.

(c) Inspection, entry, monitoring, certification, and reporting

Each permit issued under this subchapter shall set forth inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions. Such monitoring and reporting requirements shall conform to any applicable regulation under subsection (b) of this section. Any report required to be submitted by a permit issued to a corporation under this subchapter shall be signed by a responsible corporate official, who shall certify its accuracy.

(d) General permits

The permitting authority may, after notice and opportunity for public hearing, issue a general permit covering numerous similar sources. Any general permit shall comply with all requirements applicable to permits under this subchapter. No source covered by a general permit shall thereby be relieved from the obligation to file an application under [section 7661b](#) of this title.

(e) Temporary sources

The permitting authority may issue a single permit authorizing emissions from similar operations at multiple temporary locations. No such permit shall be issued unless it includes conditions that will assure compliance with all the requirements of this chapter at all authorized locations, including, but not limited to, ambient standards and compliance with any applicable increment or visibility requirements under part C of subchapter I of this chapter. Any such permit shall in addition require the owner or operator to notify the permitting authority in advance of each change in location. The permitting authority may require a separate permit fee for operations at each location.

(f) Permit shield

Compliance with a permit issued in accordance with this subchapter shall be deemed compliance with [section 7661a](#) of this title. Except as otherwise provided by the Administrator by rule, the permit may also provide that compliance with the permit shall be deemed compliance with other applicable provisions of this chapter that relate to the permittee if--

(1) the permit includes the applicable requirements of such provisions, or

(2) the permitting authority in acting on the permit application makes a determination relating to the permittee that such other provisions (which shall be referred to in such determination) are not applicable and the permit includes the determination or a concise summary thereof.

Nothing in the preceding sentence shall alter or affect the provisions of [section 7603](#) of this title, including the authority of the Administrator under that section.

CREDIT(S)

(July 14, 1955, c. 360, Title V, § 504, as added Nov. 15, 1990, [Pub.L. 101-549](#), [Title V](#), § 501, 104 Stat. 2642.)

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"NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

"SEC. 112. (a) For purposes of this section—

Definitions.

"(1) The term 'hazardous air pollutant' means an air pollutant to which no ambient air quality standard is applicable and which in the judgment of the Administrator may cause, or contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.

"(2) The term 'new source' means a stationary source the construction or modification of which is commenced after the Administrator proposes regulations under this section establishing an emission standard which will be applicable to such source.

"(3) The terms 'stationary source', 'modification', 'owner or operator' and 'existing source' shall have the same meaning as such terms have under section 111(a).

Ante, p. 1683.
List, publication.

"(b) (1) (A) The Administrator shall, within 90 days after the date of enactment of the Clean Air Amendments of 1970, publish (and shall from time to time thereafter revise) a list which includes each hazardous air pollutant for which he intends to establish an emission standard under this section.

"(B) Within 180 days after the inclusion of any air pollutant in such list, the Administrator shall publish proposed regulations establishing emission standards for such pollutant together with a notice of a public hearing within thirty days. Not later than 180 days after such publication, the Administrator shall prescribe an emission standard for such pollutant, unless he finds, on the basis of information presented at such hearings, that such pollutant clearly is not a hazardous air pollutant. The Administrator shall establish any such standard at the level which in his judgment provides an ample margin of safety to protect the public health from such hazardous air pollutant.

Proposed regulations; hearing.

"(C) Any emission standard established pursuant to this section shall become effective upon promulgation.

"(2) The Administrator shall, from time to time, issue information on pollution control techniques for air pollutants subject to the provisions of this section.

"(c) (1) After the effective date of any emission standard under this section—

"(A) no person may construct any new source or modify any existing source which, in the Administrator's judgment, will emit an air pollutant to which such standard applies unless the Administrator finds that such source if properly operated will not cause emissions in violation of such standard, and

"(B) no air pollutant to which such standard applies may be emitted from any stationary source in violation of such standard, except that in the case of an existing source—

"(i) such standard shall not apply until 90 days after its effective date, and

"(ii) the Administrator may grant a waiver permitting such source a period of up to two years after the effective date of a standard to comply with the standard, if he finds that such period is necessary for the installation of controls and that steps will be taken during the period of the waiver to assure that the health of persons will be protected from imminent endangerment.

"(2) The President may exempt any stationary source from compliance with paragraph (1) for a period of not more than two years if he finds that the technology to implement such standards is not available and the operation of such source is required for reasons of national security. An exemption under this paragraph may be extended

Presidential exemption.

ADD68.
Extension.

Report to
Congress.

for one or more additional periods, each period not to exceed two years. The President shall make a report to Congress with respect to each exemption (or extension thereof) made under this paragraph.

“(d) (1) Each State may develop and submit to the Administrator a procedure for implementing and enforcing emission standards for hazardous air pollutants for stationary sources located in such State. If the Administrator finds the State procedure is adequate, he shall delegate to such State any authority he has under this Act to implement and enforce such standards (except with respect to stationary sources owned or operated by the United States).

“(2) Nothing in this subsection shall prohibit the Administrator from enforcing any applicable emission standard under this section.

“FEDERAL ENFORCEMENT

Violations.

Compliance
order.

“SEC. 113. (a) (1) Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of any requirement of an applicable implementation plan, the Administrator shall notify the person in violation of the plan and the State in which the plan applies of such finding. If such violation extends beyond the 30th day after the date of the Administrator's notification, the Administrator may issue an order requiring such person to comply with the requirements of such plan or he may bring a civil action in accordance with subsection (b).

“(2) Whenever, on the basis of information available to him, the Administrator finds that violations of an applicable implementation plan are so widespread that such violations appear to result from a failure of the State in which the plan applies to enforce the plan effectively, he shall so notify the State. If the Administrator finds such failure extends beyond the 30th day after such notice, he shall give public notice of such finding. During the period beginning with such public notice and ending when such State satisfies the Administrator that it will enforce such plan (hereafter referred to in this section as ‘period of federally assumed enforcement’), the Administrator may enforce any requirement of such plan with respect to any person—

“(A) by issuing an order to comply with such requirement, or

“(B) by bringing a civil action under subsection (b).

Ante, pp. 1684,
1685.

Post, p. 1687.

“(3) Whenever, on the basis of any information available to him, the Administrator finds that any person is in violation of section 111 (e) (relating to new source performance standards) or 112(c) (relating to standards for hazardous emissions), or is in violation of any requirement of section 114 (relating to inspections, etc.), he may issue an order requiring such person to comply with such section or requirement, or he may bring a civil action in accordance with subsection (b).

“(4) An order issued under this subsection (other than an order relating to a violation of section 112) shall not take effect until the person to whom it is issued has had an opportunity to confer with the Administrator concerning the alleged violation. A copy of any order issued under this subsection shall be sent to the State air pollution control agency of any State in which the violation occurs. Any order issued under this subsection shall state with reasonable specificity the nature of the violation, specify a time for compliance which the Administrator determines is reasonable, taking into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. In any case in which an order under this subsection (or notice to a violator under paragraph (1)) is issued to a corporation, a copy of such order (or notice) shall be issued to appropriate corporate officers.

ADD69

violation of this Act, unless the delay in final action was due to the failure of the applicant timely to submit information required or requested to process the application. No source required to have a permit under this title shall be in violation of section 502(a) before the date on which the source is required to submit an application under subsection (c).

Public
information.

“(e) COPIES; AVAILABILITY.—A copy of each permit application, compliance plan (including the schedule of compliance), emissions or compliance monitoring report, certification, and each permit issued under this title, shall be available to the public. If an applicant or permittee is required to submit information entitled to protection from disclosure under section 114(c) of this Act, the applicant or permittee may submit such information separately. The requirements of section 114(c) shall apply to such information. The contents of a permit shall not be entitled to protection under section 114(c).

42 USC 7661c.

“SEC. 504. PERMIT REQUIREMENTS AND CONDITIONS.

“(a) CONDITIONS.—Each permit issued under this title shall include enforceable emission limitations and standards, a schedule of compliance, a requirement that the permittee submit to the permitting authority, no less often than every 6 months, the results of any required monitoring, and such other conditions as are necessary to assure compliance with applicable requirements of this Act, including the requirements of the applicable implementation plan.

“(b) MONITORING AND ANALYSIS.—The Administrator may by rule prescribe procedures and methods for determining compliance and for monitoring and analysis of pollutants regulated under this Act, but continuous emissions monitoring need not be required if alternative methods are available that provide sufficiently reliable and timely information for determining compliance. Nothing in this subsection shall be construed to affect any continuous emissions monitoring requirement of title IV, or where required elsewhere in this Act.

“(c) INSPECTION, ENTRY, MONITORING, CERTIFICATION, AND REPORTING.—Each permit issued under this title shall set forth inspection, entry, monitoring, compliance certification, and reporting requirements to assure compliance with the permit terms and conditions. Such monitoring and reporting requirements shall conform to any applicable regulation under subsection (b). Any report required to be submitted by a permit issued to a corporation under this title shall be signed by a responsible corporate official, who shall certify its accuracy.

“(d) GENERAL PERMITS.—The permitting authority may, after notice and opportunity for public hearing, issue a general permit covering numerous similar sources. Any general permit shall comply with all requirements applicable to permits under this title. No source covered by a general permit shall thereby be relieved from the obligation to file an application under section 503.

“(e) TEMPORARY SOURCES.—The permitting authority may issue a single permit authorizing emissions from similar operations at multiple temporary locations. No such permit shall be issued unless it includes conditions that will assure compliance with all the requirements of this Act at all authorized locations, including, but not limited to, ambient standards and compliance with any applicable increment or visibility requirements under part C of title I. Any such permit shall in addition require the owner or operator to notify

ADD70

the permitting authority in advance of each change in location. The permitting authority may require a separate permit fee for operations at each location.

“(f) PERMIT SHIELD.—Compliance with a permit issued in accordance with this title shall be deemed compliance with section 502. Except as otherwise provided by the Administrator by rule, the permit may also provide that compliance with the permit shall be deemed compliance with other applicable provisions of this Act that relate to the permittee if—

“(1) the permit includes the applicable requirements of such provisions, or

“(2) the permitting authority in acting on the permit application makes a determination relating to the permittee that such other provisions (which shall be referred to in such determination) are not applicable and the permit includes the determination or a concise summary thereof.

Nothing in the preceding sentence shall alter or affect the provisions of section 303, including the authority of the Administrator under that section.

“SEC. 505. NOTIFICATION TO ADMINISTRATOR AND CONTIGUOUS STATES. 42 USC 7661d.

“(a) TRANSMISSION AND NOTICE.—(1) Each permitting authority—

“(A) shall transmit to the Administrator a copy of each permit application (and any application for a permit modification or renewal) or such portion thereof, including any compliance plan, as the Administrator may require to effectively review the application and otherwise to carry out the Administrator’s responsibilities under this Act, and

“(B) shall provide to the Administrator a copy of each permit proposed to be issued and issued as a final permit.

“(2) The permitting authority shall notify all States—

“(A) whose air quality may be affected and that are contiguous to the State in which the emission originates, or

“(B) that are within 50 miles of the source,

of each permit application or proposed permit forwarded to the Administrator under this section, and shall provide an opportunity for such States to submit written recommendations respecting the issuance of the permit and its terms and conditions. If any part of those recommendations are not accepted by the permitting authority, such authority shall notify the State submitting the recommendations and the Administrator in writing of its failure to accept those recommendations and the reasons therefor.

“(b) OBJECTION BY EPA.—(1) If any permit contains provisions that are determined by the Administrator as not in compliance with the applicable requirements of this Act, including the requirements of an applicable implementation plan, the Administrator shall, in accordance with this subsection, object to its issuance. The permitting authority shall respond in writing if the Administrator (A) within 45 days after receiving a copy of the proposed permit under subsection (a)(1), or (B) within 45 days after receiving notification under subsection (a)(2), objects in writing to its issuance as not in compliance with such requirements. With the objection, the Administrator shall provide a statement of the reasons for the objection. A copy of the objection and statement shall be provided to the applicant.

“(2) If the Administrator does not object in writing to the issuance of a permit pursuant to paragraph (1), any person may petition the

101ST CONGRESS
2d Session

HOUSE OF REPRESENTATIVES

REPT. 101-490
Part 1

CLEAN AIR ACT AMENDMENTS OF 1990

R E P O R T

OF THE

COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES

ON

H.R. 3030

together with

ADDITIONAL, SUPPLEMENTAL, AND
DISSENTING VIEWS



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ADD72

achieve such reduction before the proposal of the standard. Such commitment shall be enforceable to the same extent as a regulation under this section.

"(6) Any State with a program approved under title IV may issue a permit that grants an extension permitting an existing source up to 2 additional years to comply with standards under subsection (d) if such additional period is necessary for the installation of controls. An additional extension of up to 3 years may be added for mining waste operations if the 5-year compliance time is insufficient to dry and cover mining waste in order to reduce emissions of any pollutant listed under subsection (b).

"(7) No alternative emission limitation under this paragraph shall take effect until it is approved by the Administrator.

"(8) If the State in which a source is located does not have a program approved under title IV, the Administrator may grant any extensions authorized under this subsection for such source.

"(h) PRECONSTRUCTION AND OPERATING REQUIREMENTS.—After the effective date of any standard or under subsection (d) or (f), or an alternative emission limitation under subsection (g)—

"(1) no person may construct any new major source subject to such emission standard or limitation unless the Administrator, or a State with a permit program approved under title IV, determines that such source, if properly constructed and operated, will comply with the standard or limitation; and

"(2) no person may operate any new or existing source subject to an emission standard or limitation except in compliance with such standard or limitation (and any schedule which is applicable under subsection (d)(5) or (f)(4)).

"(i) TECHNICAL ASSISTANCE.—The Administrator shall establish and maintain an air toxics clearinghouse and center to provide technical information and assistance to State and local agencies and, on a cost recovery basis, to others on control technology, health and ecological risk assessment, risk analysis, ambient monitoring and modeling, and emissions measurement and monitoring. The Administrator shall use the authority of section 103 to examine methods for preventing, measuring, and controlling emissions and evaluating associated health and ecological risks. Where appropriate, such activity shall be conducted with not-for-profit organizations.

"(j) PRESIDENTIAL EXEMPTION.—The President may exempt any stationary source from compliance with any standard or limitation under this section for a period of not more than 2 years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United States to do so. An exemption under this paragraph may be extended for one or more additional periods, each period not to exceed 2 years. The President shall report to Congress with respect to each exemption (or extension thereof) made under this subsection.

"(k) SAVINGS PROVISION.—(1) Any standard under this section in effect before the date of the enactment of the Clean Air Act Amendments of 1990 shall remain in force and effect after such date unless modified as provided in this section before the date of the enactment of such Amendments or under such Amendments. Each such standard shall be reviewed and, if appropriate, revised, to comply with the requirements of subsection (d) within 10 years after the date of the enactment of the Clean Air Act Amendments of 1990. If a timely petition for review of any such standard under section 307 is pending on such date of enactment, the standard shall be upheld if it complies with this section as in effect before that date. If any such standard is remanded to the Administrator, the Administrator may in the Administrator's discretion apply either the requirements of this section, or those of this section as in effect before the date of the enactment of the Clean Air Act Amendments of 1990.

"(2) Notwithstanding paragraph (1), no standard shall be established under this section, as amended by the Clean Air Act Amendments of 1990, for radionuclide emissions from (A) elemental phosphorous plants, (B) grate calcination elemental phosphorous plants, (C) phosphogypsum stacks, or (D) any subcategory of the foregoing. This section, as in effect prior to the date of the enactment of the Clean Air Act Amendments of 1990, shall remain in effect for radionuclide emissions from such plants and stacks.

"(3) Notwithstanding section 307 of this Act, no action of the Administrator adding a pollutant to the list under subsection (b), listing or designating a source category or subcategory under subsection (c), or determining whether or not to promulgate a standard under subsection (f)(2), shall be final agency action subject to judicial review, except that any such action may be reviewed under such section 307, if otherwise final, when the Administrator issues emission standards for such pollutant or category.

"(l) ELECTRIC UTILITIES.—The Administrator shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric

ADD73

utility steam generating units of pollutants listed under subsection (b) after imposition of the requirements of this Act. The Administrator shall report the results of this study to the Congress within 3 years after the date of the enactment of the Clean Air Act Amendments of 1990. The Administrator shall develop and describe in the Administrator's report to Congress alternative control strategies for emissions which may warrant regulation under this section. The Administrator shall regulate electric utility steam generating units under this section if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required in this subsection.

"(m) ACCIDENT PREVENTION, DETECTION, AND RESPONSE.—

"(1) REGULATIONS AND GUIDANCE.—Within 3 years after the date of the enactment of the Clean Air Act Amendments of 1990, the Administrator shall promulgate, in consultation and coordination with the Secretaries of Transportation and Labor and the laws administered by the Secretaries, reasonable regulations and appropriate guidance to provide, to the greatest extent practicable, for the prevention and detection of accidental releases into the ambient air of an air pollutant listed under this subsection from a stationary source subject to standards promulgated under this section and for response to such releases by the owners or operators thereof. The Administrator shall utilize the expertise of such Secretaries and others in promulgating such regulations. As appropriate, such regulations shall cover the use, operation, repair, replacement, and maintenance of equipment to monitor, detect, inspect, and control such releases, including the training of persons in the use and maintenance of such equipment and in the conduct of periodic inspections. The regulations shall include procedures and measures for emergency response after an accidental release in order to protect public health and the environment. The regulations shall cover storage, as well as operations. To ensure effectiveness, reasonableness, and avoidance of duplication, such regulations shall be promulgated and implemented in a manner consistent with other applicable law, including the other provisions of this section, and consolidated to the maximum extent practicable with similar requirements under other law. The regulations shall, to the greatest extent possible, recognize differences in size, operations, processes, class and categories of sources, and the voluntary actions of such sources to prevent such releases and respond to such releases. The regulations shall take effect 3 years after the date of promulgation, or 3 years after the addition of a substance to the list under this subsection, whichever is later.

"(2) LIST.—As part of the regulations under paragraph (1), the Administrator shall promulgate an initial list of significant air pollutants which, in the case of an accidental release, are known to cause or may reasonably be anticipated to cause serious adverse effects to public health and the environment. For purposes of promulgating such list, the Administrator shall use the list of extremely hazardous substances published under the Superfund Amendments and Reauthorization Act of 1986, with such modifications as the Administrator deems appropriate. The list shall include ammonia (CAS Number 7664417) and hydrogen sulfide (CAS Number 7783064). The regulations shall include an explanation of the basis for establishing the list. The list may be revised from time to time by the Administrator and shall be reviewed at least every 5 years. No air pollutant for which a national primary ambient air quality standard has been established shall be included on any such list. No substance, practice, process, or activity regulated under part B shall be subject to regulation under this subsection. At the time any air pollutant is listed, the Administrator shall establish a reasonable minimum quantity for the pollutant, taking into account toxicity, dispersibility, combustibility, or flammability and the likelihood of an accidental release.

"(3) DEFINITIONS.—For purposes of this subsection:

"(A) RELEASE.—The term 'release' means the direct or indirect introduction of any substance into the ambient air.

"(B) ACCIDENTAL RELEASE.—The term 'accidental release' means a release which is not routine and which is not authorized pursuant to any permit or emission limitation or standard under this Act or any other provision of Federal or State law.

"(n) PROTECTION OF GREAT LAKES AND CHESAPEAKE BAY.—

"(1) STUDY AND REPORT TO CONGRESS.—The Administrator shall investigate the sources of atmospheric deposition of hazardous air pollutants (and their atmospheric transformation products) on the Great Lakes, the Chesapeake Bay, and their tributary waters and evaluate the adverse effects to human health and the adverse environmental effects, including the tendency to bioaccumulate and effects resulting from indirect exposure pathways, caused by such deposition.

ADD74

Such investigation and evaluation shall include monitoring of listed substances in the ambient air, biological sampling for such substances (or their organic forms) in fish and wildlife within the Great Lakes, the Chesapeake Bay, and their tributary waters, and an analysis to characterize the sources of such substances. The Administrator shall report to Congress on the results of the investigation and evaluation within 2 years after the date of the enactment of the Clean Air Act Amendments of 1990. The Administrator shall afford an opportunity for public review of the report before submitting it to Congress and shall include a summary of the public comments with the report.

"(2) ADDITIONAL REGULATION.—As part of the report to Congress, the Administrator shall determine whether the other provisions of this section are adequate to prevent serious adverse effects to human health and serious or widespread environmental effects, including such effects resulting from indirect exposure pathways, associated with atmospheric deposition on the Great Lakes, the Chesapeake Bay, and their tributary waters of hazardous air pollutants (and their atmospheric transformation products). The Administrator shall take into consideration the tendency of such pollutants to bioaccumulate. Within 3 years after the date of the enactment of the Clean Air Act Amendments of 1990, the Administrator shall, based on such report and determination, promulgate, in accordance with this section, such further emissions standards or control measures as may be necessary and appropriate to prevent such effects, including effects due to bioaccumulation and indirect exposure pathways.

"(c) TECHNICAL ASSISTANCE FOR SMALL SOURCES.—The Administrator (and States with permit programs) shall establish means and measures to supply technical assistance and information to area sources and stationary sources that are not major stationary sources to help carry out the requirements of this section, including meeting the applicable standards and obtaining needed permits. The assistance should cover information on availability and types of equipment, measures, methods, practices, processes, and techniques in reducing emissions of air pollutants and preventing and detecting accidents. The Administrator should establish and maintain a clearinghouse of such information.

"(p) HYDROFLUORIC ACID.—(1) Not later than 3 years after the date of the enactment of the Clean Air Act Amendments of 1990, the Administrator shall complete a study to determine if there is a net benefit to public safety, human health, and the environment from the use by oil refineries of any substance or process which is an alternative to hydrofluoric acid. The study shall include an analysis of the loss of human life or damage to human health in the event of a reasonable worst-case accidental release of hydrofluoric acid or sulfuric acid or other alternative substance, the customary air and water emissions associated with the use of hydrofluoric acid or sulfuric acid or other alternative, the production of waste from the customary use of hydrofluoric acid or sulfuric acid or other alternative, and the risk and consequences of accidents from the transportation of hydrofluoric acid or sulfuric acid or other alternative. In making the determination regarding net benefit, the Administrator shall not consider the financial costs associated with the use of any alternative accidental release mitigation systems which could be rendered inoperable in the event of an earthquake, or the cause of a worst-case accidental release. In making the determination regarding net benefit, if the Administrator considers the likelihood of the risk or danger to human health and the environment from a worst-case accidental hydrofluoric acid release, the Administrator shall also consider similar probabilities resulting from the use of any alternative. In the event that existing data on hydrofluoric acid or sulfuric acid or alternative proves inadequate for the study, the Environmental Protection Agency shall perform the necessary data collection or field tests. The study shall examine both acute and chronic risks.

"(2) If the Administrator determines there is an alternative that provides a net benefit to public safety, human health, and the environment, not later than 1 year and 3 months after the completion of the study under paragraph (1), the Administrator shall promulgate regulations requiring each oil refinery in the Nation to convert to such alternative within 10 years. The Administrator is authorized to make differing determinations on a site-specific basis.

"(3) Not later than 2 years after the completion of the study under paragraph (1), the Administrator shall make recommendations to Congress, and is authorized to promulgate regulations to implement, methods to mitigate or eliminate the danger of a worst-case accidental release of hydrofluoric acid at all other commercial facilities, including the use of alternative processes or substances which provide a net benefit to public safety, human health, and the environment, and relocation of facilities to unpopulated areas.

"(q) MICKEY LELAND URBAN AIR TOXICS RESEARCH CENTER.—

"(1) ESTABLISHMENT.—The Administrator shall oversee the establishment of a National Urban Air Toxics Research Center, to be located at a university, a hos-

ADD75

wise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

* * * * *

(d)(1) This subsection applies to—

(A) the promulgation or revision of any national ambient air quality standard under section 109,

(B) the promulgation or revision of an implementation plan by the Administrator under section 110(c),

[(C) the promulgation or revision of any standard of performance under section 111 or emission standard under section 112,]

(C) the promulgation or revision of any standard of performance under section 111, or emission standard or limitation under section 112(d), any standard under section 112(f), or any regulation under section 112(g)(1)(D) and (F), or any regulation under section 112(m) or (n),

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[(F) promulgation or revision of regulations pertaining to orders for coal conversion under section 113(d)(5) (but not including orders granting or denying any such orders),]

(F) the promulgation or revision of any regulation under title V (relating to control of acid deposition),

* * * * *

(M) action of the Administrator under section 126 (relating to interstate pollution abatement), [and]

(N) the promulgation or revision of any regulation pertaining to consumer and commercial products under section 183(e),

(O) the promulgation or revision of any regulation pertaining to field citations under section 113(d)(3),

(P) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel vehicle, clean-fuel fleet, and clean fuel programs under section 212,

(Q) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under section 213,

(R) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under section 217,

(S) the promulgation or revision of any regulation pertaining to market-based alternative controls under section 214, the promulgation or revision of any regulation under title IV,

(T) the promulgation or revision of any regulation under section 183(f) pertaining to marine vessels, and

[(N)] (U) such other actions as the Administrator may determine.

* * * * *

(h) **REPORTS.**—No report required by this Act to be submitted to Congress shall be subject to judicial review.

(i) **PUBLIC PARTICIPATION.**—It is the intent of Congress that, consistent with the policy of the Administrative Procedures Act, the

ADD76